

Report

**US 50
Environmental
Assessment/
Corridor Study**

**Indiana
Department of
Transportation**

September 2007

Report for Indiana Department of Transportation

US 50 Environmental Assessment/Corridor Study Dearborn County, Indiana

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OVERVIEW

The study of US 50 in Dearborn County, Indiana, is sponsored by the Indiana Department of Transportation (INDOT) and the Federal Highway Administration (FHWA). Recommendations of this study will be reviewed by INDOT for inclusion in the State's Long Range Transportation Plan.

The corridor termini are Dillsboro on the west end and the intersection of US 50 and State Route (SR) 1/Bellevue Avenue (I-275 Connector) on the east end. The study corridor passes near the City of Dillsboro and through the Cities of Aurora, Lawrenceburg, and Greendale and is approximately 18 miles in length. The general study area includes the southern portion of Dearborn County.

The study is being directed by a management team of INDOT and FHWA through their primary consultant Strand Associates, Inc.[®] (Strand), along with team members Wilbur Smith Associates (Wilbur Smith) and Doe Anderson, Inc. Stakeholder participation was coordinated through a Community Advisory Committee (CAC) comprised of local government officials, economic development groups, local businesses, neighborhood groups, and other interested parties in the Dearborn County area. Public meetings were held in Lawrenceburg to elicit general public comment. Early coordination with state and federal agencies has also been conducted to provide agencies with the opportunity to review and comment on all potential alternatives.

The study is being conducted as an Environmental Assessment (EA)/Corridor Study (CS) in accordance with FHWA's *Indiana's Streamlined Environmental Impact Statement (EIS) Procedures*. The general purpose of this study is to establish the central purpose and need for improvements along the corridor, develop and analyze alternatives which meet the purpose and need, and make recommendations for projects of independent utility which should be advanced for future development and study. Those projects identified for future development will be subject to further evaluation in the National Environmental Policy Act (NEPA) process as required (EIS, EA/FONSI, CE).

The Gateway Study is referred to in several locations of this report. The Gateway Study is a recent investigation sponsored by The Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and Dearborn County, completed by M.E. Companies. This study is a companion study to the US 50 EA/CS that evaluated current land use and access management along US 50. The purpose of the study was to identify and implement solutions to chronic traffic congestion on US 50 and develop a plan for land use, access management, and street layout that increases safety and the overall efficiency of the corridor. In conjunction with proposed improvements from this US 50 EA/CS, the Gateway Study is intended to coordinate proposed US 50 improvements to maximize the economic potential of US 50. Recommendations from this study will be evaluated by INDOT for inclusion as short- and long-term improvements to various segments of the corridor. Access management solutions suggested by the Gateway Study are generally included in this EA/CS report as recommended improvement solutions, although specific projects of independent utility have not been identified.

SUMMARY OF PURPOSE AND NEED

For discussion in this report, purpose and need for the project have been divided into four categories: Congestion, Safety, Tanners Creek Bridge, and US 50 as a Statewide Mobility Corridor. For ease of presentation, the Corridor was also divided into four segments: Segment 1-Dillsboro to Aurora (SR 262 to SR 148); Segment 2-Aurora to Lawrenceburg (SR 148 to SR 48); Segment 3-Lawrenceburg (SR 48 to Arch Street.); and Segment 4-Greendale (Arch Street to I-275). Each of these segments is discussed in greater length in Section 2.

Based on an assessment of purpose and need, the underlying need for improvements along US 50 is based on current and forecasted deficiencies in Level of Service (LOS) at several intersections present in Segments 2, 3, and 4. Additionally, safety concerns, based on current crash rates, are present in Segment 2, the intersection of US 50 and Arch Street (between Segments 3 and 4), and the US 50 and SR 48 intersection (between Segments 2 and 3). Tanners Creek Bridge improvements are essential, since this is the only major crossing over Tanners Creek for the County, and the current structure received a sufficiency rating of less than 50, classifying it as functionally obsolete. US 50's designation as a Statewide Mobility Corridor is a demonstration of its significance to vehicular and commercial truck movement through the state. Existing volume-to-capacity ratios present strong evidence that the eastern section of the US 50 Corridor is failing to fulfill its function as a statewide mobility corridor. Currently, Segments 3 and 4 cannot provide high speed, free-flowing conditions, efficiently service the large volume of through traffic, or provide adequately for heavy commercial traffic flow. Forecasts of future traffic volumes indicate even greater periods of congestion and a further reduction in the ability of this section of US 50 to provide adequate mobility between neighboring urban communities.

RECOMMENDATIONS

After analysis of several alternatives, the following recommended alternatives are provided for further evaluation. These are divided into each segment of the corridor as described in the report and are further divided into short- and long-term recommended improvements:

Segment 1-Dillsboro to Aurora (SR 262 to SR 148)

Short- and Long-Term Improvements:

- *Access Management Solutions-Recommendations in Gateway Study*

Segment 2-Aurora to Lawrenceburg (SR 148 to SR 48)

Short-term Improvement:

- *Transportation System Management (TSM) Concept 11-Eliminate Left Turn Lanes Except at Major Intersections and Replace TWLTL with Barrier Median*

Long-Term Improvements:

- *Intersection Improvement-US 50 at Wilson Creek Road*
- *Intersection Improvement-US 50 at Wal-Mart Entrance*

Segment 3-Lawrenceburg (SR 48 to Arch Street)

Short-Term Improvements:

- *TSM Concept 2-No Left Turns Allowed in Downtown Lawrenceburg during Peak Periods*

Long-Term Improvements

- *Alternate 1-On-Alignment Capacity Expansion (from 4 to 6 lanes) in Downtown Lawrenceburg*
- *Alternate 5-One-Way Pair (Near North)*
- *Alternate 6-One-Way Pair (Mid North)*

Segment 4-Greendale (Arch Street to I-275)

Short-Term Improvements

- *Access Management Solutions- Recommendations in Gateway Study*

Long-Term Improvements

- *Access Management Solutions- Recommendations in Gateway Study*
- *Intersection Improvements-US 50 at I-275 Interchange*

SECTION 1
EXISTING CONDITIONS AND NEEDS ANALYSIS

1.01 STUDY AREA TERMINI

This Existing Conditions and Needs Analysis was completed as part of an Environmental Assessment/Corridor Study (EA/CS) for US 50 in Dearborn County, Indiana. The corridor termini are SR 262 in Dillsboro on the west end and the intersection of US 50 and State Road (SR) 1/Belleview Avenue (I-275 Connector) on the east end. The study corridor passes near the City of Dillsboro and through the Cities of Aurora, Lawrenceburg, and Greendale and is approximately 18 miles in length. The general study area includes the southern portion of Dearborn County. Figure 1.01-1 shows the study corridor's location within Indiana. Figure 1.01-2 shows state and federal highways adjacent to the study corridor.

Consideration was given to extending the study corridor to include US 50 from the I-275 Connector to the Indiana-Ohio state line. The roadway characteristics, however, are quite different north of the I-275 Connector than they are south of it. Traffic volumes fall from nearly 35,000 vehicles per day (vpd) to less than 14,000 and the cross section is reduced to four lanes undivided from six lanes with a center left-turn lane. These considerations make the I-275 Connector a logical study corridor terminus.

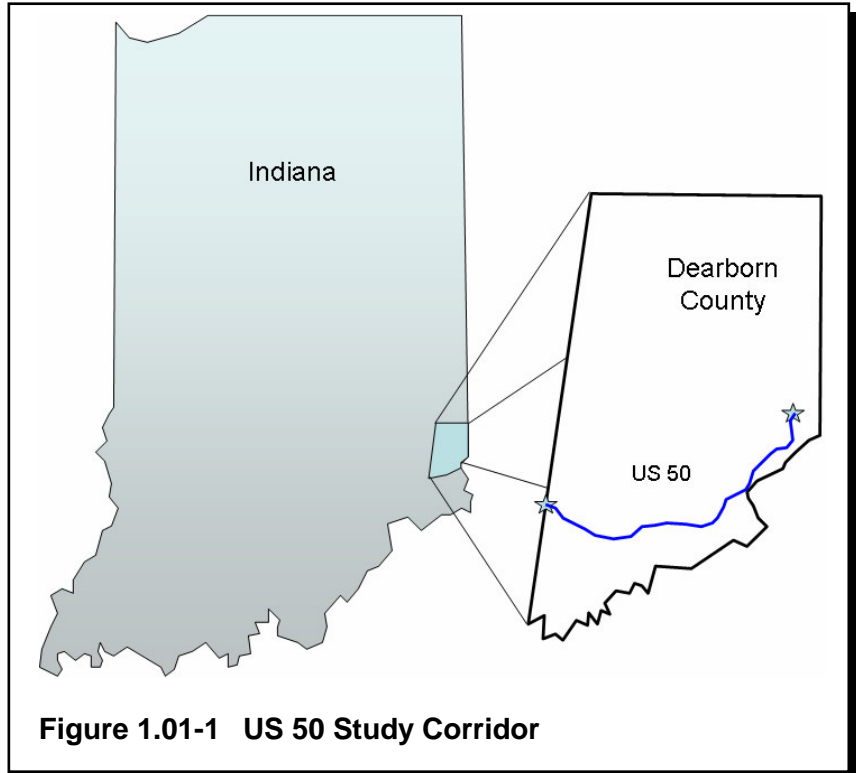


Figure 1.01-1 US 50 Study Corridor

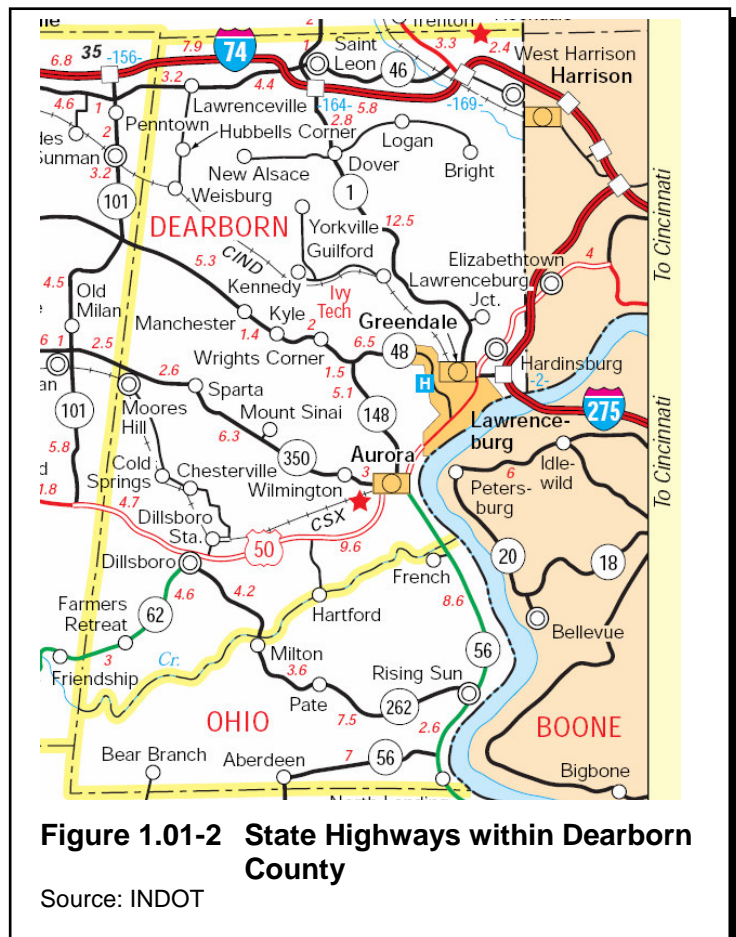


Figure 1.01-2 State Highways within Dearborn County

Source: INDOT

1.02 SOCIOECONOMIC PROFILE

Dearborn County is located in southeastern Indiana, just outside of the Cincinnati, Ohio, metropolitan area. SR 1 and SR 56 are the primary north-south routes while US 50 provides east-west mobility. US 50 connects Cincinnati to points west and southwest.

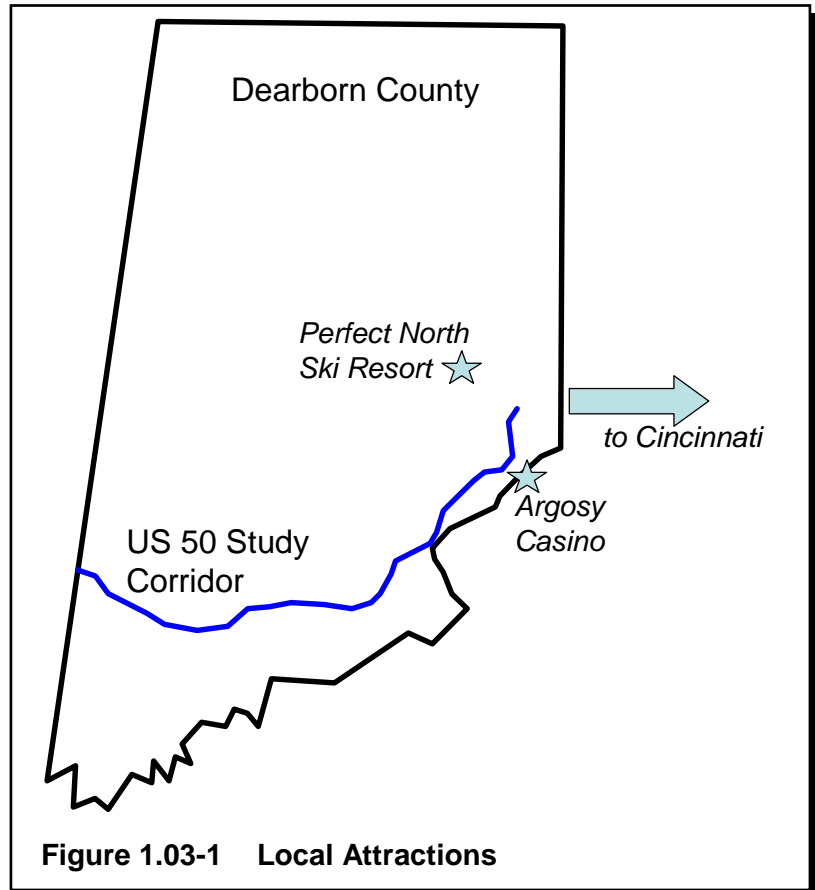
According to the United States Census Bureau, Dearborn County had an estimated population of 48,583 in the year 2004 and experienced 18.7 percent growth in population between 1990 and 2000. This made Dearborn County the 12th fastest growing county in the state over that time period. Indiana's state population grew 9.7 percent from 1990 to 2000. According to the Dearborn County Transportation Assessment, March 2004, it is also one of the fastest growing counties within the Ohio-Kentucky-Indiana Regional Council of Governments' (OKI) planning area. Dearborn County's population age profile is similar to that of the State's overall.

The largest population centers in 2000 within Dearborn County were Lawrenceburg with 4,685 people, Greendale with 4,296 people, and Aurora with 3,965 people. The 1999 median household income in Dearborn County was \$48,899 compared to \$41,567 statewide. The County's per capita income in 1999 of \$20,431 was nearly identical to the state average. The County's unemployment rate was 3.3 percent in 2000, which is below the national and state averages. In 2001, there were 963 nonfarm employers in the County resulting in employment of 13,561 people. This employment number decreased 1.8 percent from 2000 to 2001.

1.03 GENERAL STUDY AREA TRANSPORTATION CHARACTERISTICS

There are no public airports or passenger rail facilities serving Dearborn County. Transit is minimal, although a privately operated, demand-responsive ride service is available. Bicycle and pedestrian systems exist within the incorporated areas and, to some extent, along the Ohio River. The overall lack of transportation options, however, results in a dependence on automobile travel. This is verified by the fact that more than 70 percent of County households own two or more vehicles. Nearly 83 percent of commuters countywide drive to work alone, contributing to high US 50 traffic volumes.

Local attractions also result in increased transportation demand in Dearborn County. The Argosy Casino is located in Lawrenceburg off US 50. It provides riverboat gambling and hotel facilities that attract an estimated 3.5 million visitors to the area annually. In the winter months, Perfect North Slopes offers skiing and snow tubing. The resort is located northeast of Greendale and attracts an estimated 150,000 to 175,000 patrons annually. Additionally, central Dearborn County is only 25 miles west of downtown Cincinnati, Ohio, resulting in significant directional commuter traffic. Figure 1.03-1 shows the location of these attractions. Another nearby attraction is the Grand Victoria Casino and Resort, located on SR 56 southeast of Lawrenceburg; this attracts many visitors who use the project corridor to reach this facility.



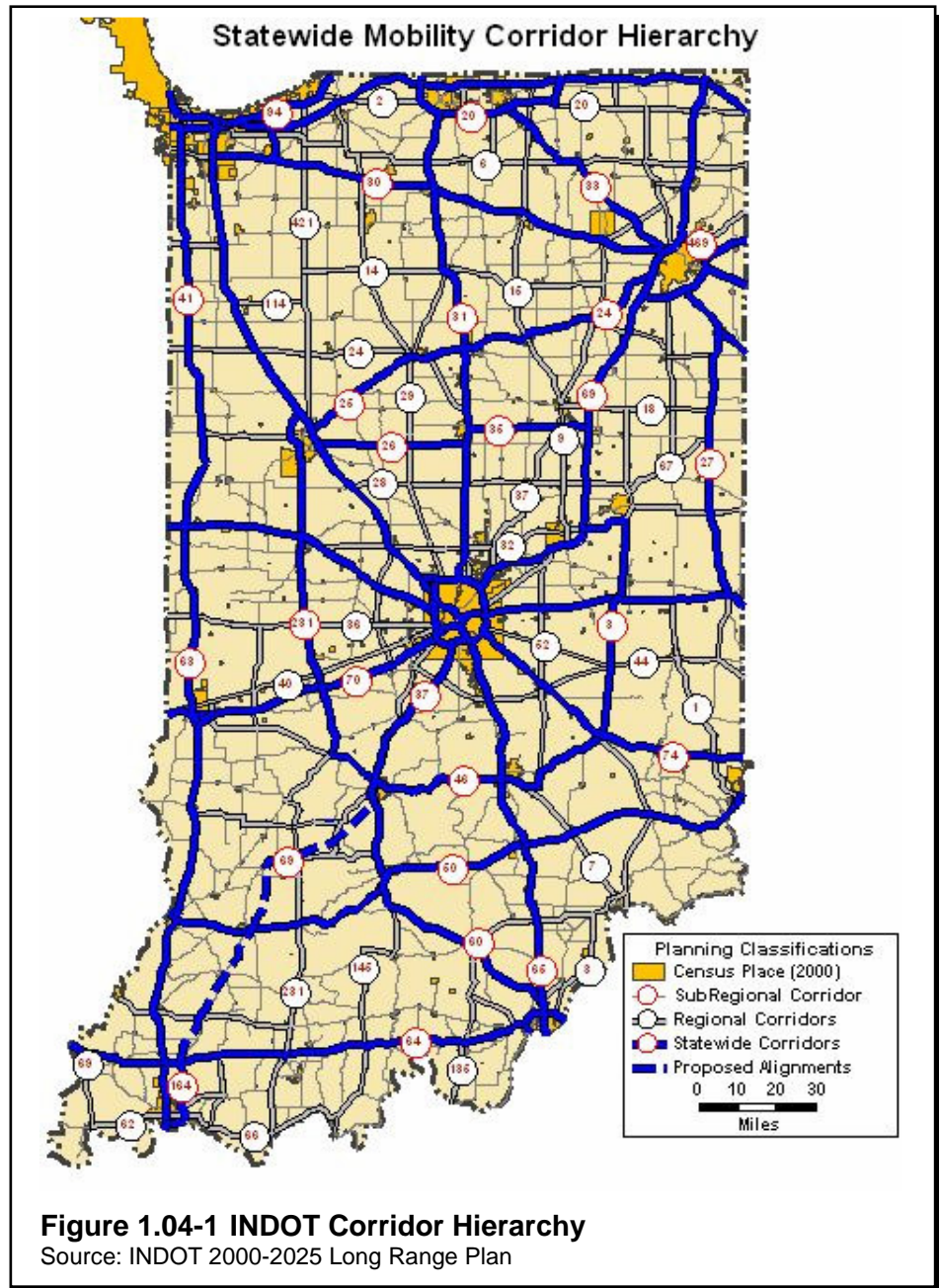
1.04 ROADWAY CHARACTERISTICS

A. Classification

In the Indiana Department of Transportation's (INDOT's) 2000-2025 Long Range Plan, US 50 is classified as a Statewide Mobility Corridor (SMC), as shown in Figure 1.04-1. These corridors connect major metropolitan areas of the state and neighboring states, provide regional access to cities and regions around the state, and play a vital role in the economic development of the state. SMCs are characterized by high design standards, high traffic speeds, free-flowing conditions, and large vehicular and truck traffic volumes. They are generally multilane divided highways with full-access control, where possible. This portion of US 50 is functionally classified as a Rural Principal Arterial and it is part of the National Highway System (NHS).

In addition to US 50, major routes through Dearborn County include I-74 and SR 1. I-74 is classified as an

SMC in INDOT's 2000-2025 Long Range Plan, a Rural Interstate, and is part of the NHS. SR 1 is classified as a Regional Corridor in INDOT's 2000-2025 Long Range Plan. These corridors connect smaller cities and regions to SMCs and have mid level design standards, high-to-moderate speeds, free-flowing conditions where practical, and moderate vehicular and truck traffic volumes. SR 1 is classified as a Rural Minor Arterial and is not part of the NHS.



B. Existing Geometrics

US 50 is a traditional rural, four-lane divided highway from the Dearborn/Ripley County line to just southwest of Aurora where the median narrows. Dedicated left-turn lanes or a two-way left-turn lanes (TWLTL) are provided, depending on the density of access points, from southwest of Aurora to Argosy Parkway in Lawrenceburg. US 50 is a six-lane divided highway with dedicated left-turn lanes or a TWLTL configuration from Argosy Parkway to SR-1/I-275, the end of the study corridor.

Although detailed geometric data for US 50 was unavailable for use in this document, field visits suggest the horizontal and vertical curves along the study corridor generally conform to design standards for this type of facility. Shoulder width is deficient, ranging from 4 to 6 feet in the rural portions of the study corridor and from 0 to 4 feet in urban locations.

C. Existing Access Points

The number and spacing of access points along a highway has a direct impact on the road's capacity and safety. As access point density increases, crashes tend to increase and capacity decreases. Access point density on US 50 varies significantly with the highest density occurring between SR 148 and Wilson Creek Road on the east side of Aurora. Table 1.04-1 shows the access point density on US 50.

Location	Access Point Density (Accesses/Mile)	Comments
County Highway 750 to County Line Road	14.7	Mostly Agricultural or Low Density Residential Access
County Line Road to SR 262	9.6	Mostly Agricultural or Low Density Residential Access
SR 262 to Mount Tabor Road/Hoffman Road	27.9	Mostly Agricultural or Low Density Residential Access
Mount Tabor Road/Hoffman Road to Cole Lane/Gatch Hill Road	27.5	Mostly Agricultural or Low Density Residential Access
Cole Lane/Gatch Hill Road to Dutch Hollow Road	29.4	Mostly Agricultural or Low Density Residential Access
Dutch Hollow Road to SR 350	5.2	Mostly Public Access Points (Local Streets)
SR 350 to SR 148	38.0	Exclusively Commercial and Public Access (Local Streets)
SR 148 to Wilson Creek Road	53.3	75 percent are Commercial Accesses
Wilson Creek Road to SR 48	31.0	Almost Exclusively Commercial Accesses
SR 48 to Argosy Parkway	34.5	Almost Exclusively Commercial Accesses
Argosy Parkway to SR 1/I-275	22.1	75 percent are Commercial Accesses

Table 1.04-1 Access Point Density on US 50

As indicated in Table 1.04-1, these direct access points on US 50 tend to serve lower-volume traffic generators (agricultural and low-density residential land uses) on the west side of Dearborn County and higher volume traffic generators (commercial land uses) on the east side.

D. Bridges

INDOT maintains an inventory of all bridges over 20 feet in length, which includes safety and functionality information. The inventory includes the following data:

- Bridge Number: Number assigned to the structure in the Bridge Inspection Report.
- Facility Carried: The name of the road or highway that the bridge serves.
- Feature Intersected: The name of the water feature, valley, railroad, or road corridor that the bridge spans.
- Deficiencies: Bridges can be determined to be Structurally Deficient (SD) or Functionally Obsolete (FO).
- Sufficiency Rating: This number quantifies the need for replacement or repair and ranges from 0 to 100. It is based on a bridge's structural adequacy and safety, serviceability and functionality, and its degree of public importance. Any bridge that is determined to be SD or FO and carries a sufficiency rating below 50 is eligible for Federal Aid for replacement. Any bridge that is determined to be SD or FO and carries a sufficiency rating above 50 but below 80 is eligible for Federal Aid for rehabilitation.

Table 1.04-2 shows the INDOT inventory data for US 50 bridges within the study limits.

Bridge Number	Feature Intersected	Facility Carried	Sufficiency Rating	Functionally Obsolete	Structurally Deficient
050-15-02169	CSX RR and 2 Local Streets	US 50	78.7	No	No
050-015-1232	Wilson Creek	US 50	70.0	No	No
050-15-00210	Tanners Creek	US 50	42.2	Yes	No
Source: INDOT via <i>SR 101 Corridor Improvement Feasibility Study: Existing Conditions Report</i> by Bernardin, Lochmueller & Associates, Inc.					
Table 1.04-2 INDOT Inventory Data for US 50 Bridges Within the Study Limits					

According to the data, the Tanners Creek Bridge in Lawrenceburg is FO and would qualify for Federal Aid. The City of Lawrenceburg is currently investigating improvement alternatives for this bridge and intends to locally fund the project.

1.05 EXISTING CRASH RATES

The study team obtained crash data for the US 50 study corridor from 2003 through 2005. In rural areas, crash rates are typically analyzed along corridors. They are expressed as the number of crashes per 100 million vehicle miles. Corridor crash rates on US 50 from the Ripley County line to Wilson Creek Road are shown in Table 1.05-1, listed from west to east. The portions of US 50 shown in **bold** indicate locations that experienced higher than average crash rates for this type of facility.

Location	Daily VMT	Total Crashes	Injury Crashes	Fatal Crashes	Total Rate	Injury Rate	Fatal Rate
County Highway 750 to County Line Road	14,250	10	1	0	64	6	0
County Line Road to SR 262	16,300	2	0	0	11	0	0
SR 262 to Mount Tabor Road/Hoffman Road	30,050	29	7	0	88	21	0
Mount Tabor Road/Hoffman Road to Cole Lane/Gatch Hill Road	21,850	20	5	0	84	21	0
Cole Lane/Gatch Hill Road to Dutch Hollow Road	12,200	29	7	0	217	52	0
Dutch Hollow Road to SR 350	22,350	50	9	0	204	37	0
SR 350 to SR 148	17,300	61	12	0	322	63	0
SR 148 to Wilson Creek Road	28,250	78	24	0	252	78	0
Statewide Rates for Rural Arterials, 1997-99	--	11,190	2,828	118	187	47	1.96
Crash Rates per 100 Million Vehicle Miles Crashes with Deer Excluded							

Table 1.05-1 Corridor Crash Rates 2003 to 2005

In general, the rural portions of US 50 east of Cole Lane and through the City of Aurora experienced overall and injury crash rates above the statewide average for Rural Principal Arterial highways. The most common contributing factors to crashes on US 50 include an animal or object in the road, following too closely, and failure to yield the right-of-way (R/W).

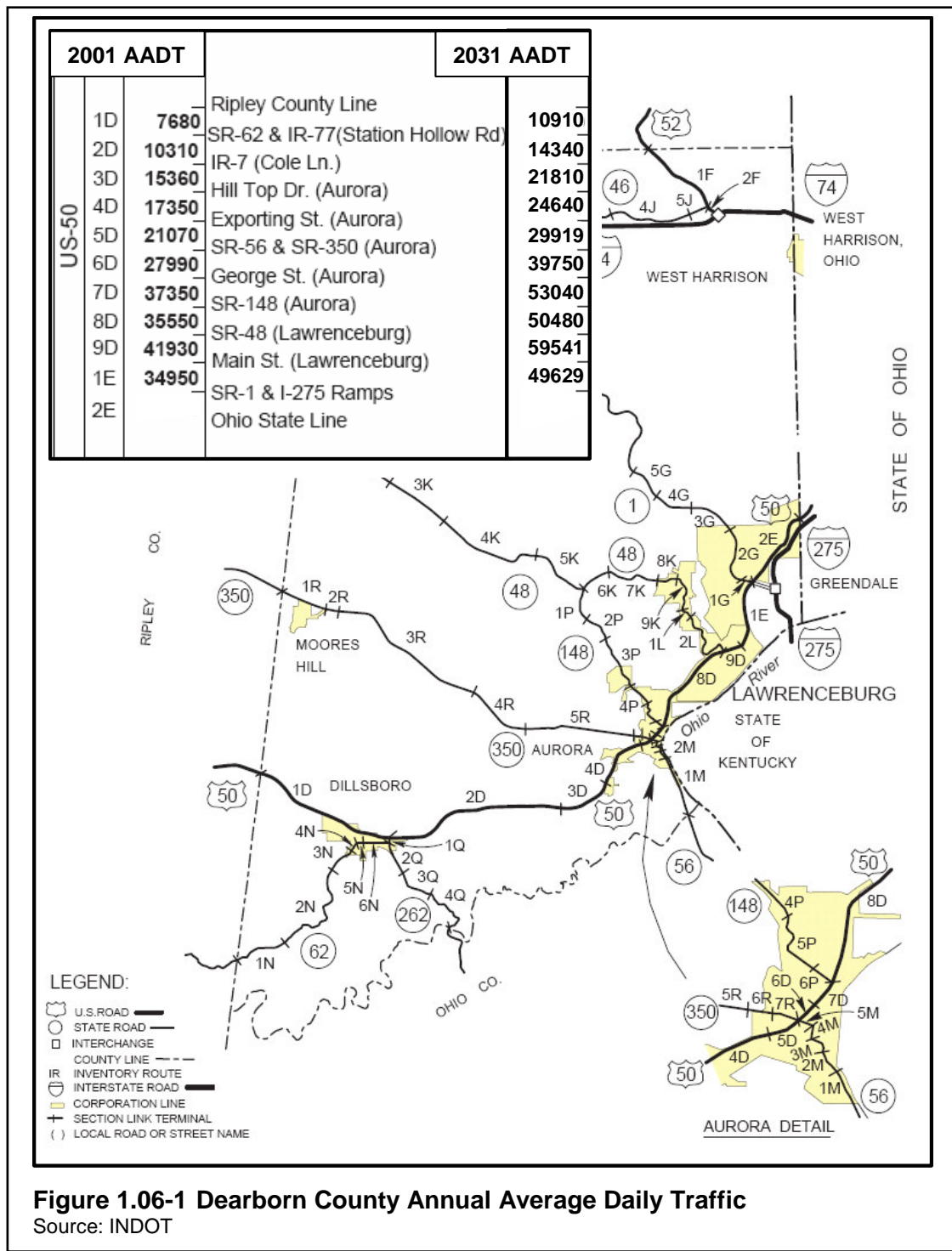
In urban areas, crash rates are typically analyzed at intersections. They are expressed as the number of crashes per one million vehicles entering the intersection. Intersection crash rates at locations where traffic volume data was available and a significant number of crashes occurred are shown in Table 1.05-2 listed from west to east. Note that crash data provided by INDOT for the US 50/SR 1/I-275 intersection was from data collected from 2004 to 2006.

Location	Daily Entering Vehicles	Total Crashes	Injury Crashes	Fatal Crashes	Total Rate	Injury Rate	Fatal Rate
US 50 and SR 48	46,500	48	13	0	0.94	0.26	0.00
US 50 and Main Street	46,000	13	2	0	0.26	0.04	0.00
US 50 and Front Street	32,500	26	4	0	0.73	0.11	0.00
US 50 and Water Street	26,000	8	1	0	0.28	0.04	0.00
US 50 and Arch Street	32,000	72	20	0	2.05	0.57	0.00
US 50 and SR 1/I-275*	56,000	94	17	0	1.54	0.28	0.00
INDOT Threshold for Intersections					2.00		
Crash Rates per Million Vehicles Entering the intersection							
* INDOT data for this intersection from 2004 to 2006							
Table 1.05-2 Intersection Crash Rates 2003 to 2005							

An intersection crash rate of 2.0 crashes per million vehicles entering is often established by INDOT as the threshold above which safety improvements may be considered or investigated. The only intersection analyzed that had a crash rate above this threshold from 2003 to 2005 data was US 50 and Arch Street. This intersection also had the highest injury crash rate of those studied, with an injury-producing crash occurring every 55 days on average. Rear-end crashes were the most common type (51 percent) with right-angle crashes occurring second most often (18 percent).

1.06 EXISTING TRAFFIC VOLUMES

Figure 1.06-1 shows the 2001 Annual Average Daily Traffic (AADT) in Dearborn County on US 50. The daily traffic ranged from less than 8,000 vpd near the Ripley County line to over 40,000 vpd through downtown Lawrenceburg. Traffic volumes on US 50 in 2006 are likely to be 7 to 10 percent higher based on typical traffic growth trends.



Traffic forecasts completed by INDOT predict annual growth of 1.4 percent for the corridor as a whole. Travel demand modeling completed as part of this study confirms this growth rate. Actual traffic growth will vary along the corridor depending on changes in adjacent and nearby land use and regional travel patterns. Figure 1.06-1 also shows the forecasted traffic volumes along US 50 assuming 1.4 percent annual growth.

Commercial truck traffic is also a factor along the study corridor. The classification of US 50 as a SMC, and as a rural principal arterial suggest that it is a key route for commercial vehicle travel. Vehicle classification data from INDOT indicates that average daily truck traffic accounts for a significant portion of total traffic along the corridor. On the west end of the study corridor, single unit and tractor-trailer combinations make up 18 to 20 percent of total traffic. These percentages tend to decrease from west to east along the corridor, with commercial truck traffic accounting for 10 to 13 percent of all traffic between Aurora and Lawrenceburg. Additionally, turning-movement counts in Lawrenceburg indicate that trucks on US 50 represent from six to 13 percent of total traffic during the AM peak hour and from two to four percent during the PM peak hour.

1.07 EXISTING TRAFFIC OPERATIONS

Traffic operations were analyzed using two methodologies. First, for more rural portions of US 50 west of Lawrenceburg, overall corridor operations were analyzed using the Highway Capacity Software (HCS) Multilane module. This method of analysis considers the highway cross section (divided or undivided), lane width, lateral clearance, access point density, traffic volumes, type of terrain (level, rolling, or mountainous), and vehicle classification (percent heavy vehicles and percent recreational vehicles). The operational characteristics of highways are evaluated based on a Level of Service (LOS). Along a rural multilane highway the LOS rating is based on average travel speed and vehicle density (passenger cars per lane per mile). The LOS ratings range from LOS A (ideal conditions) to LOS F (volume exceeds highway capacity). LOS A indicates that the average vehicle travels at the highway's ideal free-flow speed. LOS F indicates that traffic volumes exceed the highway's theoretical capacity and major delays and safety concerns can be expected.

Within the Lawrenceburg-Greendale area, from the Tanners Creek Parkway to SR 1 intersections, microsimulation was completed using Synchro/SimTraffic software. Microsimulation models individual vehicles on a simulated network that represents existing or proposed street conditions. Operations using this type of analysis are evaluated based on conditions at the intersections. LOS is based on average delay in seconds per vehicle for traffic entering the intersection. LOS A indicates that travelers will experience minimal average delay at an intersection (less than 10 seconds). LOS F indicates that the average delay is quite high (more than 50 seconds at an unsignalized intersection and 80 seconds at a signalized intersection).

LOS E is often considered to be the limit of acceptable delay and LOS F indicates a facility on which improvements are needed. Many communities and agencies establish LOS D as their minimum acceptable condition.

A. Existing Corridor Operations

Table 1.07-1 shows the results of the AM and PM corridor operations assessment of the western portion of the study corridor. All locations operate at LOS C or better during the AM and PM peak hours.

Location	Direction			
	Eastbound		Westbound	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
County Highway 750 to County Line Road	LOS A	LOS A	LOS A	LOS A
County Line Road to SR 262	LOS A	LOS A	LOS A	LOS A
SR 262 to Mount Tabor Road/Hoffman Road	LOS A	LOS A	LOS A	LOS A
Mount Tabor Road/Hoffman Road to Cole Lane/Gatch Hill Road	LOS A	LOS A	LOS A	LOS A
Cole Lane/Gatch Hill Road to Dutch Hollow Road	LOS A	LOS A	LOS A	LOS A
Dutch Hollow Road to SR 350	LOS A	LOS A	LOS A	LOS A
SR 350 to SR 148 (Aurora)	LOS B	LOS B	LOS A	LOS B
SR 148 to Wilson Creek Road	LOS C	LOS B	LOS A	LOS C

Table 1.07-1 Existing Corridor LOS from HCS

B. Existing Intersection Operations

Table 1.07-2 shows the results of the AM and PM intersection operations assessment for the eastern segments of the corridor.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS F Movement(s)	Overall Intersection Ops	LOS F Movement(s)
US 50 and Wilson Creek Road	LOS A		LOS D	EBL (from US 50)
US 50 and Wal-Mart Entrance	LOS A		LOS C	
US 50 and Tanners Creek Parkway	LOS B		LOS C	
US 50 and SR 48	LOS D		LOS E	EBL SBL, SBR
US 50 and Main Street	LOS B		LOS D	EBL NBL, NBT SBL
US 50 and Front Street	LOS A		LOS C	NBL
US 50 and Walnut Street	LOS A		LOS A	NBL SBL
US 50 and Arch Street	LOS A		LOS B	EBT, WBT
US 50 and Argosy Parkway	LOS B		LOS C	
US 50 and Rudolph Way	LOS A		LOS A	
US 50 and Lorey Lane	LOS A		LOS B	
US 50 and SR 1/I-275	LOS D	EBL, EBT NBL, SBL	LOS F	EBT, WBL, NBL SBL, SBT

Note: NBL = Northbound Left NBT = Northbound Through NBR = Northbound Right
SBL = Southbound Left SBT = Southbound Through SBR = Southbound Right
EBL = Eastbound Left EBT = Eastbound Through EBR = Eastbound Right
WBL = Westbound Left WBT = Westbound Through WBR = Westbound Right

Table 1.07-2 Existing Intersection Operations from Synchro/SimTraffic

Microsimulation modeling suggests, and field observation confirms, that significant congestion exists today along the US 50 corridor at the Wilson Creek Road intersection and particularly within Lawrenceburg during periods of high traffic. While concerns during the AM peak-hour are relatively minimal, PM peak hour traffic volumes result in significant queuing and delays for eastbound and westbound travelers. Field observation indicates that queuing on a typical weekday afternoon can block intersections, and signal cycle failures are common for westbound traffic through downtown Lawrenceburg. Figure 1.07-1 shows heavy queuing on a Tuesday afternoon in late January 2006.



US 50 and Main Street Looking West—Westbound US 50 Rolling Queue from the SR 48 Intersection Downstream Reaching the Main Street Intersection.



US 50 and Main Street looking East—Westbound US 50 Rolling Queue Reaching the Front Street Intersection Upstream.

Figure 1.07-1 Weekday Afternoon Field Observations

SECTION 2
PURPOSE AND NEED

2.01 PURPOSE

INDOT has evaluated the state highway system relative to levels of passenger vehicular traffic as well as freight movement. Creating efficient connectors between major population and industrial areas within the state and across its borders is necessary to encourage economic growth and fiscal health for Indiana. As part of the evaluation, INDOT has developed classifications of the state highway system to prioritize the needs and importance of each corridor. A three-tiered structure has been developed based on levels of use and connectivity. SMCs are at the apex of the structure. These corridors are identified as being able to provide high-speed, safe, free-flowing arterial connections between metropolitan areas within the state and to surrounding states. They are also major freight movers and part of the State's goal to connect all areas with populations of 25,000 or more. SMCs should offer upper level design standards, carry longer distance commuter traffic effectively, and bypass congested areas.

US 50 has been designated as an SMC by INDOT. The purpose of this study is to evaluate that portion of US 50 from SR 262 in Dillsboro to the SR 1/Belleview Avenue Intersection in Dearborn County in terms of the ideal characteristics of an SMC as determined by INDOT to identify those portions of the corridor that fail to meet the mobility corridor guidelines, and to identify potential transportation projects to improve poorly functioning elements of the corridor.

2.02 BACKGROUND

Dearborn County is primarily rural; however, the eastern portion of the county in the Aurora/Greendale/Lawrenceburg area exhibits urban characteristics. Single passenger vehicular travel to work is the dominant method of commuting. Public transit is basically nonexistent; there is no passenger rail service or any public use airports within the County limits. Dearborn County residents rely almost exclusively on automobile travel, elevating the need for current roadways to provide adequate levels of service. The County's accessibility to the Greater Cincinnati area continues to fuel the urbanization of the eastern portion of the corridor area, raising the level of commuter traffic. Tourist traffic also continues to grow with the success of the nearby Argosy Casino as well as Perfect North Slopes. This study will identify corridor needs and identify and evaluate alternatives to meet those needs.

2.03 NEED

One of the mandates of INDOT's Statewide Long Range Multimodal Transportation Plan is to maintain existing facilities and service, which includes appropriate expansion of capacity to ensure the effective transportation of people, goods and freight. Safety and the acknowledgement that an effective transportation system is an integral part of the economic security of the State are also key elements.

The need for the project will be divided into four categories including (1) congestion, (2) safety, (3) Tanners Creek crossing, and (4) US 50's role as an SMC. For ease of presentation the Corridor is divided into four segments:

- Segment 1–Dillsboro to Aurora (SR 262 to SR 148)
- Segment 2–Aurora to Lawrenceburg (SR 148 to SR 48)
- Segment 3–Lawrenceburg (SR 48 to Arch Street)
- Segment 4–Greendale (Arch Street to I 275)

A. Congestion

Highways and intersections are typically evaluated in terms of vehicular traffic operations based on the LOS. The LOS ratings range from A, indicating free flowing conditions with little or no congestion, to F, which signifies failure of the transportation facility. LOS D is often considered the threshold of acceptable operations, with LOS E and LOS F representing unacceptable conditions.

Existing conditions analysis shows that Segment 1 functions adequately. Traffic moves smoothly and the roadway generally appears to conform to design standards for a Rural Arterial classification. The westernmost section of Segment 1 serves mostly agricultural or low-density residential areas, becoming more commercialized as the corridor reaches Aurora. Forecasted traffic levels for 2030 indicate that Segment 1 should continue to operate with little or no congestion through both the AM and PM peak hours.

Segment 2 also currently functions adequately. The most congested location within Segment 2 is the SR 148 to Wilson Creek Road area. The existing LOS for this section during the PM peak hour is LOS C. Analysis using 2030 traffic volume forecasts predicts operations in this section to decrease to LOS D.

Segment 3, from SR 48 to Arch Street, experiences significant congestion at the US 50 and SR 48 intersection during the existing AM peak hour, while other locations function adequately. The existing PM peak hour sees more congestion at all locations and significant friction for turning movements across the highway. The US 50/SR 48 intersection currently operates at LOS E overall. Forecasted traffic volumes will create overall failure of the SR 48 and Main Street intersections during the PM peak hour in 2030. Queuing will also become a serious concern causing intersection blockage and impairing corridor safety. This intersection is currently being relocated west of the existing intersection as part of a separate project for realignment of US 48. The expected construction completion date for the new intersection is June 2007.

Segment 4 currently operates adequately with the exception of the US 50/SR 1/I-275 (Bellevue Road) intersection. This intersection operates at LOS F overall during the PM peak hour. Vehicles making turns at this intersection experience long queues and traffic signal cycle failure (waiting through more than one signal cycle before getting through the intersection). Future traffic levels should be able to function adequately across Segment 4, except for the US 50/SR 1/I-275 intersection, which will experience extreme delays and queuing because of congestion.

B. Safety

The westernmost section of Segment 1 experiences no major safety issues. However, crash data shows that total accident rates rise above the statewide average while moving east from Coles Lane in Segment 1 to Wilson Creek Road in Segment 2. The injury crash rates are also above the statewide average throughout much of the Segment 2 portion of US 50.

Segment 3, which contains the urbanized area of Lawrenceburg from SR 48 to Arch Street, had intersection crash rates below the state threshold for considering safety improvements. The US 50 and SR 48 intersection had the greatest number of both total crashes and injury crashes.

Segment 4 has one intersection with an overall crash rate that warrants attention. The US 50/Arch Street intersection currently experiences 2.05 crashes per million vehicles entering the intersection. INDOT typically considers a rate above 2.0 as the threshold above which safety improvements should be considered. No crash data was available for the US 50/SR 1/Bellville Road intersection, so it is unknown if this intersection also poses a safety risk for the corridor. Although the total and injury crash rates are higher than average along some portions of US 50, there were no fatalities along the study corridor from 2003 through 2005.

C. Tanners Creek Bridge

Tanners Creek Bridge is located on the west side of Lawrenceburg. It has received a sufficiency rating of less than 50, classifying it as functionally obsolete. The bridge is eligible for federal funding for replacement. The bridge provides the only major crossing over Tanners Creek for the county. The lack of alternative routes hinders the response times of emergency vehicles. A major accident or construction on or near the bridge could severely limit mobility for all travelers on US 50 and would be a major concern for emergency responders. The City of Lawrenceburg has significant concerns regarding safety and alternate routes if the bridge is out of service and is currently reviewing options to replace the structure or provide an additional crossing.

To fulfill the mandate to provide a safe and effective transportation system, various alternative solutions to alleviate congestion, improve safety, and provide system redundancy by constructing a parallel crossing over Tanners Creek are being examined through a study being conducted by ASP. A preliminary analysis of alternatives and a proposed alignment for the crossing have been developed. INDOT is currently reviewing this study and the impact that the proposed project would have on US 50 operations and mobility.

It is important to recognize that operations and travel demand modeling of proposed alternatives for this study presume that the new Tanners Creek Bridge project is committed to be built. Alternatives proposed in this study would require revision to include an additional crossing over Tanners Creek if this project does not advance to construction.

D. Role as Statewide Mobility Corridor

US 50 is an SMC, demonstrating its significance to vehicular and commercial truck movement through the State. The westernmost section of the US 50 Corridor from Dillsboro to Aurora appears to function adequately in regard to traffic operations. Future vehicular volume forecasts do not indicate a significant level of congestion in the Dillsboro area. However, safety issues are currently evident in several segments of the Corridor as expressed by the higher than average crash data in Segments 1, 2, and 4; future conditions are expected to worsen. Existing volume-to-capacity ratios present strong evidence that the eastern section of the US 50 Corridor cannot provide high speed, free-flowing conditions, efficiently service the large volume of through traffic, or provide adequately for heavy commercial traffic flow.

Forecasts of future traffic volumes indicate even greater periods of congestion and a further reduction in the ability of this section of US 50 to provide adequate mobility between neighboring urban communities. The only major crossing of Tanners Creek is functionally obsolete, and the local population has expressed a desire to provide an additional crossing to address both congestion and the lack of system redundancy. This study recommends additional capacity across Tanners Creek.

SECTION 3
ALTERNATIVES PRESENTATION AND SCREENING

3.01 OVERVIEW

After establishing Purpose and Need, project alternatives were developed to address the safety, congestion and SMC needs. Alternatives were suggested through coordination with a Community Advisory Committee (CAC), Public Involvement (PI) Meeting input, and through scoping discussions with INDOT and FHWA. The alternatives can generally be grouped in three conceptual categories:

- **No-Build**
The proposal to do nothing within the corridor was evaluated for merit. These alternatives presume that no additional actions will be taken, aside from existing committed projects on the state or local roadway systems.
- **Short-term Improvements**
Short-term improvements include modifications such as elimination or restriction of turn lanes, signal changes, and other access and traffic management controls.
- **Long-term Improvements**
These alternatives include new bypass routes, one-way pairs, on-alignment capacity expansions, and major intersection improvements.

Operations modeling using Synchro/SimTraffic was used to provide future corridor operations assessment on US 50 using forecasted 2030 traffic and the existing transportation corridor. Similar modeling was also used to evaluate overall intersection operations and individual movements within each major intersection. Forecasted traffic volumes used in Synchro modeling were based on traffic projections provided by INDOT and confirmed with travel demand modeling of the US 50 corridor. Travel demand modeling completed by Wilbur Smith Associates was also used to evaluate select project alternatives.

Alternatives were each evaluated against the purpose and need of the project along with other considerations. Other methods to evaluate alternatives included CAC and PI meetings, state and federal agency comments, R/W requirements, cost, and preliminary evaluation of potential impacts to wetlands, historical sites, and possible hazardous waste sites. Tables summarizing these impacts follow.

A summary of purpose and need measures is provided in Table 3.01-1. Table 3.01-2 provides a summary of R/W requirements, estimated number of disturbed structures, wetland impacts, historic impacts, and estimated costs. The results of projected corridor operations are provided in Tables 3.01-3 and 3.01-4. These results will be discussed in greater detail within each segment alternatives discussion.

Alternative	Segment	Congestion	Safety	Tanners Creek Bridge	Mobility Corridor
Alternative 1 –On-Alignment Capacity Expansion in Downtown Lawrenceburg	3	2030 LOS - Acceptable	Improves Arch Street	N/A	Enhances Corridor
TSM Concept 2 –No Left Turns Allowed in Downtown Lawrenceburg During Peak Periods	3	2030 LOS - Not Acceptable	Intersection Improvements	N/A	Minor Improvement
TSM Concept 3 –Reversible Lanes in Downtown Lawrenceburg	3	2030 LOS - Not Acceptable	No Improvements	N/A	Minor Improvement
Alternative 4 –One-Way Pair (South)	3	2030 LOS - Acceptable	Improves Arch Street	N/A	Enhances Corridor
Alternative 5 –One-Way Pair (Near North)	3	2030 LOS - Acceptable	Improves Arch Street	N/A	Enhances Corridor
Alternative 6 –One-Way Pair (Mid North)	3	2030 LOS - Acceptable	Improves Arch Street	N/A	Enhances Corridor
Alternative 7 –One-Way Pair (Far North)	3	2030 LOS - Acceptable	Improves Arch Street	N/A	Enhances Corridor
Alternative 8 –SR 1 to SR 48 Connector (Nowlin Avenue)	3	2030 LOS - Not Acceptable	Minor Improvement to Arch Street	N/A	Minor Improvement
Alternative 9 –SR 1 to SR 48 Connector (Indiana Glass)	3	2030 LOS - Not Acceptable	Minor Improvement to Arch Street	N/A	Minor Improvement
Alternative 10 –New Ohio River Bridge (US 50 to KY 20)	3	2030 LOS - Acceptable	Improves Arch Street	N/A	Enhances Corridor
TSM Concept 11 –Eliminate Left Turn Lanes Except at Major Intersections and Replace TWLTL with Barrier Median	2	2030 LOS - Acceptable	Improves SR 350 to SR 148, Eliminates Non-Signalized Left Turns	N/A	Enhances Corridor
Wilson Creek Road Intersection	2	2030 LOS - Acceptable	N/A	N/A	Minor Improvement
Wal-Mart Entrance	2	2030 LOS - Acceptable	N/A	N/A	Minor Improvement
I-275 Intersection	4	2030 LOS - Acceptable	N/A	N/A	Minor Improvement

Table 3.01-1 Summary of Purpose and Need Measures

Alternative	Segment	New R/W Area	No. Bldg. Disturbed	Wetland Disturbed (acres)	Historic Structures/ Districts	Cost (\$) Millions
Alternative 1 –On-Alignment Capacity Expansion in Downtown Lawrenceburg	3	4.0	10 to 15	0.0	10-15 Sites/ 2 Districts	20
TSM Concept 2 –No Left Turns Allowed in Downtown Lawrenceburg During Peak Periods	3	0.0	0	0.0	0 Sites/ 0 Districts*	0.4
TSM Concept 3 –Reversible Lanes in Downtown Lawrenceburg	3	1.2	5 to 10	0.0	0 Sites/ 0 Districts	2.4
Alternative 4 –One-Way Pair (South)	3	20.0	30 to 40	3.0	20-30 Sites/ 2 Districts	45
Alternative 5 –One-Way Pair (Near North)	3	1.5	4 - 5	0.3	20-25 Sites/ 2 Districts	24
Alternative 6 –One-Way Pair (Mid North)	3	6.2	5 to 10	0.0	20-25 Sites/ 2 Districts	25
Alternative 7 –One-Way Pair (Far North)	3	16.5	35 to 40	1.2	20-30 Sites/ 2 Districts	47
Alternative 8 –SR 1 to SR 48 Connector (Nowlin Avenue)	3	70	5 to 10	0.6	1-3 Sites/ 0 Districts	37
Alternative 9 –SR 1 to SR 48 Connector (Indiana Glass)	3	71	5 to 10	0.6	1-3 Sites/ 0 Districts	36
Alternative 10 –New Ohio River Bridge (US 50 to KY 20)	3	120	45 to 50	8.0	Unknown Sites/ 1 District	750
TSM Concept 11 –Eliminate Left-Turn Lanes Except at Major Intersections and Replace TWLTL with Barrier Median	2	0.0	0	0.0	0 Sites/ 2 Districts	5.0
Wilson Creek Road Intersection	2	2.5	0	0.3	0 Sites/ 0 Districts	8.4
Wal-Mart Entrance	2	2.0	0	0.0	0 Sites/ 0 Districts	6.7
I-275 Intersection	4	4.0	2 - 3	0.0	0 Sites/ 0 Districts	28

* There will likely be secondary impacts to two Historic Districts

Table 3.01-2 Summary of Environmental and Cultural Considerations

Location	Direction			
	Eastbound		Westbound	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
County Highway 750 to County Line Road	LOS A	LOS A	LOS A	LOS A
County Line Road to SR 262	LOS A	LOS A	LOS A	LOS A
SR 262 to Mount Tabor Road/Hoffman Road	LOS A	LOS A	LOS A	LOS A
Mount Tabor Road/ Hoffman Road to Cole Lane/Gatch Hill Road	LOS A	LOS A	LOS A	LOS A
Cole Lane/Gatch Hill Road to Dutch Hollow Road	LOS A	LOS A	LOS A	LOS B
Dutch Hollow Road to SR 350	LOS A	LOS A	LOS A	LOS B
SR 350 to SR 148 (Aurora)	LOS C	LOS B	LOS B	LOS C
SR 148 to Wilson Creek Road	LOS C	LOS C	LOS B	LOS D

Table 3.01-3 Future (2030) No-Build Corridor LOS from Highway Capacity Software

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Operations	LOS F Movement(s)	Overall Intersection Operations	LOS F Movement(s)
US 50 and Wilson Creek Road	LOS A		LOS F	EBL, EBT
US 50 and Wal-Mart Entrance	LOS A		LOS F	EBL, WBL, WBT, WBR
US 50 and Tanners Creek Parkway	LOS C		LOS D	
US 50 and SR 48	LOS E	EBL	LOS F	EBT, EBL, WBT, WBR, SBL
US 50 and Main Street	LOS A		LOS F	EBL, NBL, NBT, NBR, SBL, SBT, SBR
US 50 and Front Street	LOS A		LOS E	WBL, NBL, NBT, NBR, SBL, SBT, SBR
US 50 and Walnut Street	LOS B		LOS B	NBL, SBL
US 50 and Arch Street	LOS B		LOS B	EBL, WBL
US 50 and Argosy Parkway	LOS C	NBL	LOS C	
US 50 and Rudolph Way	LOS B		LOS A	
US 50 and Lorey Lane	LOS B		LOS B	

Table 3.01-4 Future (2030) No-Build Intersection Operations from Synchro/Sim Traffic

3.02 SEGMENT 1—DILLSBORO TO AURORA (SR 262 TO SR 148)

This westernmost segment encompasses a length of 9.4 miles from SR 262 on the west end to SR 148 on the east end.

Existing conditions analysis shows that Segment 1 functions adequately. Traffic moves smoothly and the roadway generally appears to conform to design standards for a Rural Arterial classification.

The westernmost section of Segment 1 serves mostly agricultural or low-density residential areas, becoming more commercialized as the corridor reaches Aurora.

Operations modeling using HCS was used to provide corridor operations assessment on western US 50 using forecasted 2030 traffic and the existing transportation corridor. Forecasted volumes were based on traffic projections provided by INDOT and confirmed with travel demand modeling of the US 50 corridor.

Forecasted traffic levels for 2030 indicate that Segment 1 should continue to operate with little or no congestion through both the AM and PM peak hours. Table 3.01-3 provides operations modeling results for the western corridor of US 50. Based on current and projected acceptable LOS and lack of safety concerns in this predominantly rural section of the project, no purely construction alternatives are being advanced for this segment.

Access management solutions are recommended for short- and long-term improvements for this segment. Such improvements are expected to improve safety and thus, satisfy purpose and need.

Such management solutions were investigated by the recent Gateway Study prepared for OKI and Dearborn County by ME Companies. The specific purpose of the Gateway Study was to evaluate land use and access control along the US 50 corridor. Many of the recommendations from this companion study will be able to be implemented as short- and long-term solutions to congestion, as well as lowering the existing crash rates at various locations across the corridor. This is especially true of Segment 1, which does not appear to warrant a significant construction alternative.

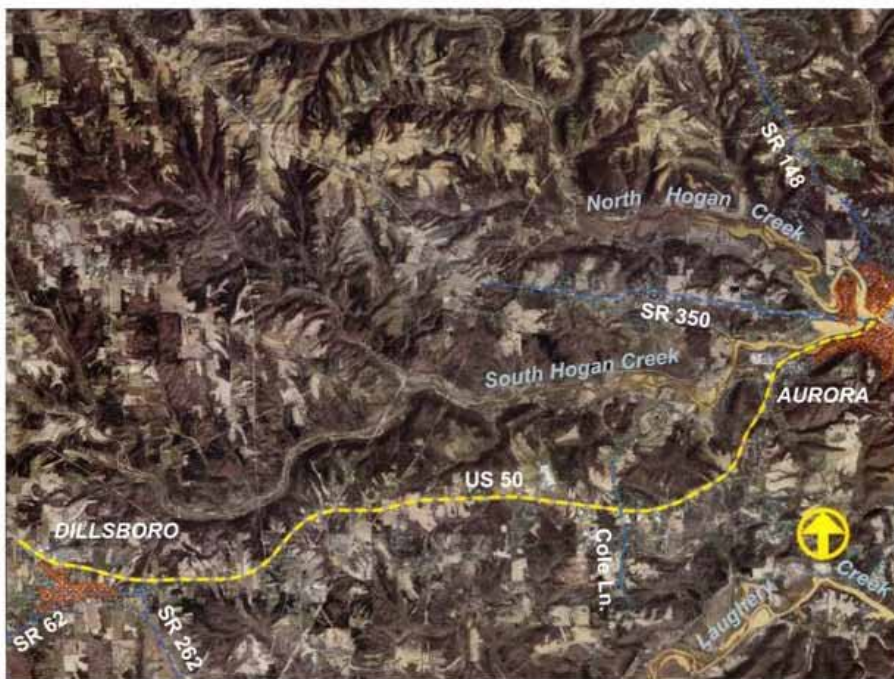


Figure 3.02-1 Segment 1—Dillsboro to Aurora

3.03 SEGMENT 2—AURORA TO LAWRENCEBURG (SR 148 TO SR 48)

Segment 2, defined by the intersection of US 50 with SR 148 on the west end to SR 48 on the east end, includes a total of 3.0 miles and is shown in Figure 3.03. As discussed in the Purpose and Need Section of this report, this segment currently functions adequately. The most congested location within Segment 2 is the SR 148 to Wilson Creek Road area. The existing LOS for this section during the PM peak hour is LOS C. Analysis using 2030 traffic volume forecasts predicts operations in this section to decrease to LOS D.

The forecasted LOS warrants consideration of improvements within this section. The following improvements are proposed:



Figure 3.03-1 Segment 2—Aurora to Lawrenceburg

A. No-Build Alternative

As shown in Tables 3.01-3 and 3.01-4, the 2030 projected LOS for the section of US 50 from SR 148 to Wilson Creek Road diminishes to LOS D, presuming no improvements are completed. Additionally, the US 50 and Wilson Creek Road, US 50 and Wal-Mart Entrance, and US 50 and SR 48 intersections all experience movements with LOS F, while overall intersection operations will experience a LOS of F. Since these levels of service are not acceptable and purpose and need are not met, the “No-Build” alternative for this segment is not considered an option.

B. Short-Term Improvement

Transportation System Management (TSM) Concept 11–Eliminate Left-Turn Lanes Except at Major Intersections and Replace TWLTL with Barrier Median

This management solution covers a length of 2.5 miles from SR 350 to SR 48. The proposed improvement would eliminate left-turn lanes except at major intersections. Also suggested is a replacement of TWLTL with a barrier median. This solution provides encouragement of future access management solutions, such as combining existing access points wherever possible, encouraging new developments to access existing intersecting roads, and connecting existing frontage roads. The total cost of this project is \$5.0 million (2017). No additional R/W would be required, and no environmental impacts are anticipated as a result of this alternative.

Since this eliminates non signalized left turns in the corridor, engineering judgment suggests this will provide an acceptable level of service and will improve safety within this section. This serves to enhance the Statewide Mobility Corridor and thus, satisfies purpose and need. TSM Concept 11 is recommended for further evaluation.

C. Long-Term Improvements

1. Intersection Improvement–US 50 at Wilson Creek Road

This alternative was proposed at an early CAC meeting. This project will provide additional capacity and improve the LOS at the intersection to an acceptable level as indicated in Table 3.03-1.

The proposed improvement includes dual left-turn lanes from Wilson Creek Road and US 50. The length of the project is 1500 feet on US 50 and 700 feet on Wilson Creek Road. Impacts for the project include the need for an additional 2.5 acres of R/W, including disturbance of 0.3 acres of wetland, and elimination of approximately 30 parking spaces. The total cost of this project is \$8.4 million (2017).

As indicated in Table 3.01-4, barring improvement, this intersection is projected to experience overall failure by 2030. Since the PM Peak LOS of the intersection will be improved by this project from LOS F to LOS D (Table 3.03-1), this project is recommended for further evaluation.

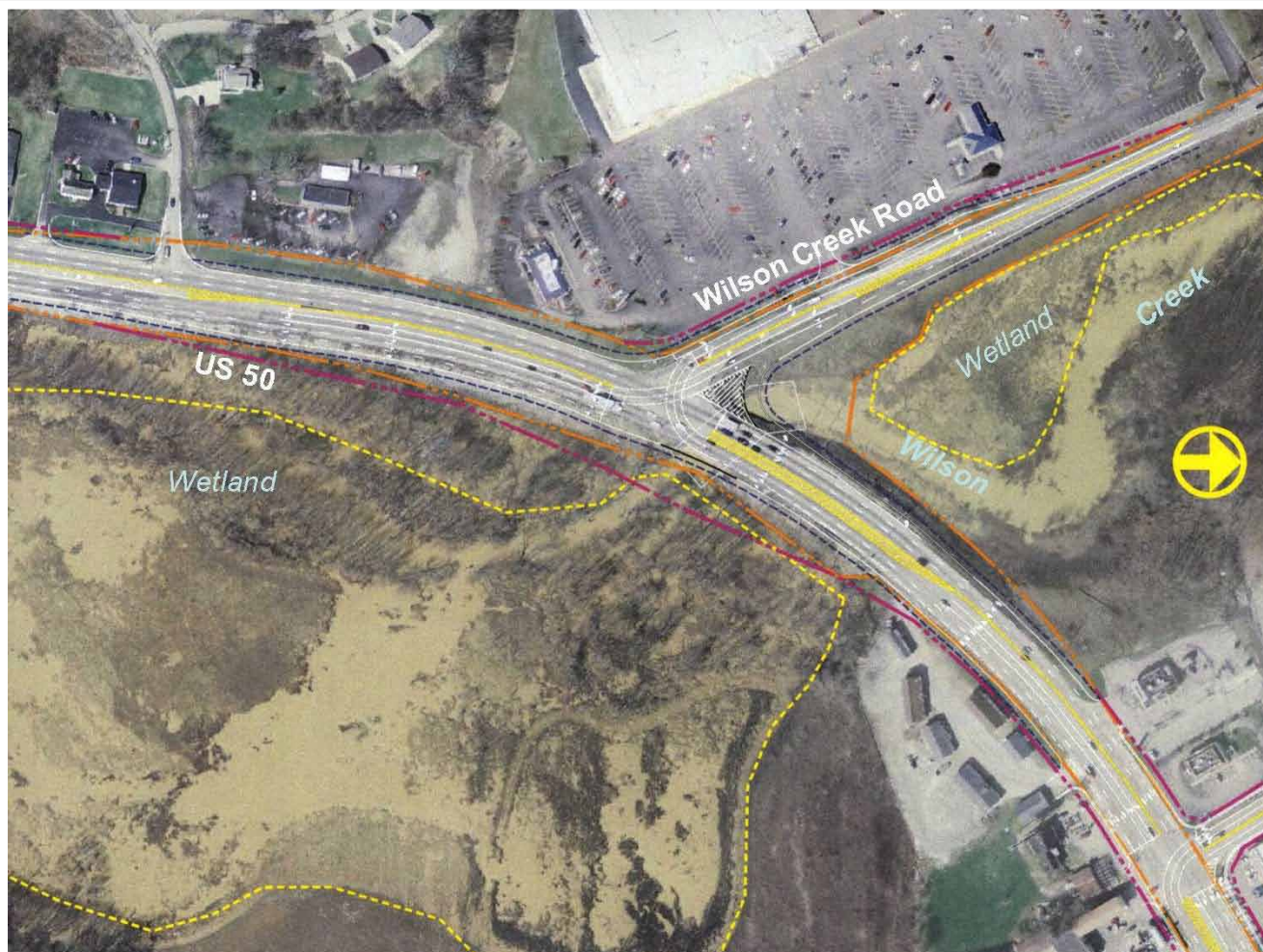


Figure 3.03-2 Intersection Improvement at US 50 and Wilson Creek Road

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Wilson Creek Road	LOS B		LOS D	NBL SBT EBL, EBR

Note: NBL = Northbound Left SBT = Southbound Through
EBL = Eastbound Left EBR = Eastbound Right

Table 3.03-1 2030 Wilson Creek Road Improved Intersection Operations from Synchro

2. Intersection Improvement—US 50 at Wal-Mart Entrance

This intersection improvement was also proposed at an early CAC meeting. This project will provide additional capacity at the intersection and will improve the 2030 PM Peak LOS at the intersection from LOS F to LOS C, as shown in Tables 3.01-4 and 3.03-2.

The proposed improvement includes dual left-turn lanes from Wal-Mart and US 50 eastbound and exclusive right turns from US 50 westbound. North- and southbound through movements will also be eliminated, which will simplify signal phasing. This project will have significant business impacts to one or both sides of US 50 and will require approximately 2.0 acres of new R/W. No wetland impacts are expected for this proposed project. The construction cost of this project is \$6.7 million (2017 dollars).

Because of the failure in LOS by 2030, the need for improvement of this intersection is demonstrated. As the proposed improvements will provide acceptable LOS, this project is recommended for further evaluation.

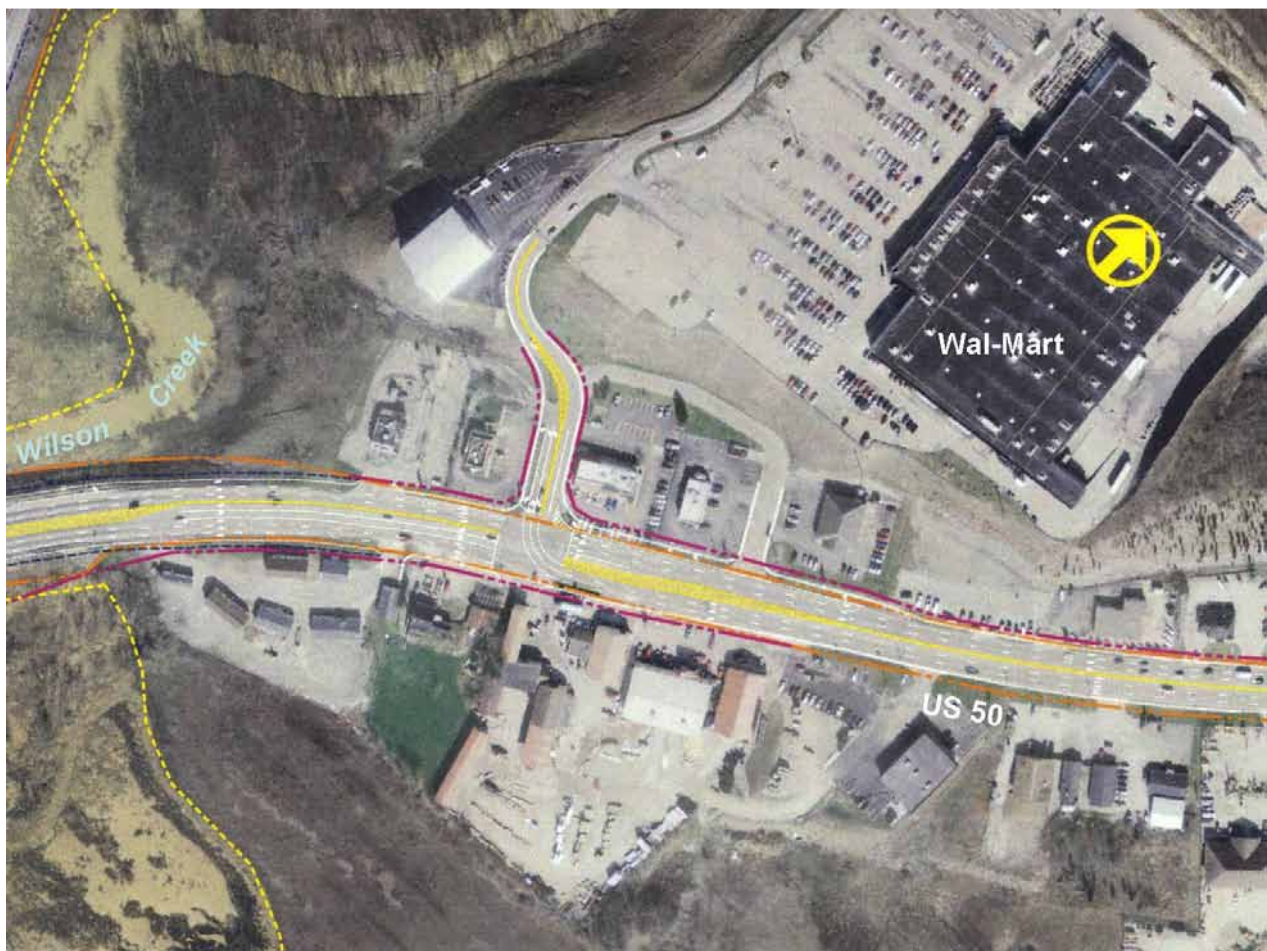


Figure 3.03-3 Intersection Improvement at US 50 and Wal-Mart Entrance

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Wal-Mart Entrance	LOS A		LOS C	NBL SBL, SBR EBL WBL, WBT

Note: NBL = Northbound Left SBL = Southbound Left SBR = Southbound Right
EBL = Eastbound Left WBL = Westbound Left WBT = Westbound Through

Table 3.03-2 2030 Wal-Mart Entrance Improved Intersection Operations from Synchro

3.04 SEGMENT 3—LAWRENCEBURG (SR 48 to ARCH STREET)

This segment, which passes through downtown Lawrenceburg, covers a length of 1.0 mile from SR 48 on the west to Arch Street on the east.

Segment 3 experiences significant congestion at the US 50/SR 48 intersection during the existing AM peak hour, while other locations function adequately. The existing PM peak hour sees more congestion at all locations and significant friction for turning movements across the highway. The US 50/SR 48 intersection currently operates at LOS E overall. Forecasted traffic volumes will create overall failure of the SR 48 and Main Street intersections during the PM peak hour in 2030, while the Front Street intersection will operate at LOS E. Queuing will also become a serious concern causing intersection blockage and impairing corridor safety. The SR 48 intersection is currently being relocated and constructed west of the existing intersection. This project will be completed by June 2007.

As this segment poses the most significant current and future concern for LOS and safety, numerous alternatives were investigated during this study.

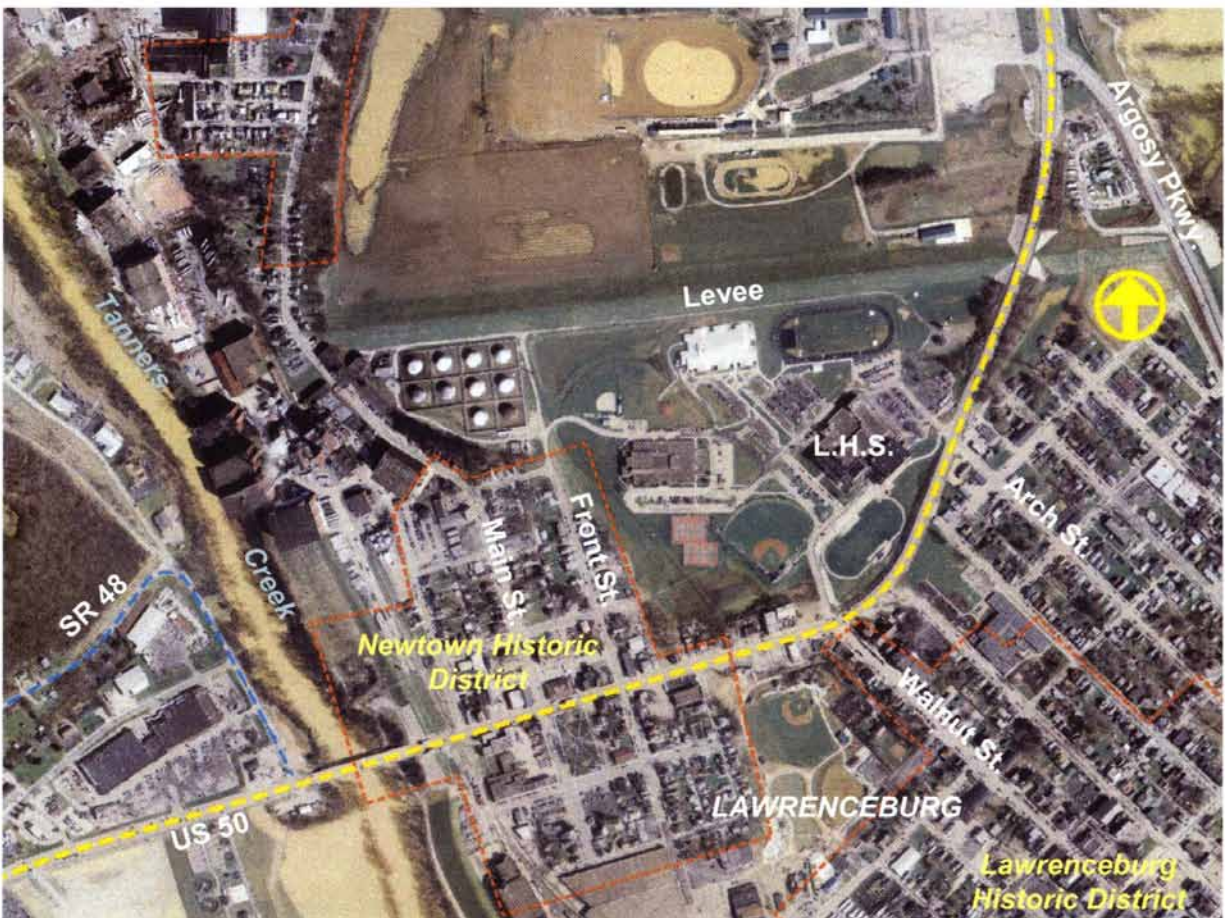


Figure 3.04-1 Segment 3—Lawrenceburg

A. Short-Term Improvements

1. *TSM Concept 2–No Left-Turns Allowed in Downtown Lawrenceburg During Peak Periods*

This TSM concept creates two-phase signals and increases capacity through Lawrenceburg. Since left turns will be prohibited, vehicles would be required to turn right and circle the block to reach an intended destination.

This solution, although providing short-term improvement, is not expected to be sufficient to improve long-term operations to LOS D or better. Minimal impacts on US 50 are expected, but secondary impacts to other local streets and local businesses may be significant. The total cost of this project is estimated at \$400,000 (yr 2008 dollars)

This project is recommended for further evaluation as a short-term solution to congestion for downtown Lawrenceburg because of the ability to complete the project in a short timeframe and the low cost and minimal impacts of the alternative. Ultimately, however, long-term solutions must also be considered.

2. *TSM Concept 3–Reversible Lanes in Downtown Lawrenceburg*

This TSM concept provides for three lanes in the peak direction and two lanes in the opposite direction, with left turns prohibited during peak hours. During off-peak hours, a TWLTL will be utilized, with two lanes operating in each direction.

Minimal impacts are expected through this solution; approximately 1.2 acres of new R/W will be required and 5 to 10 relocations may be necessary. The total construction cost is estimated at \$2.4 million (yr 2017 dollars).

Operations analysis indicates this alternative will not achieve acceptable 2030 LOS, particularly if the reversible lanes are not able to achieve their theoretical capacity, which has been observed by INDOT and OKI. This alternative, therefore, does not satisfy purpose and need and is not recommended for further evaluation.

B. Long-Term Improvements

1. *Alternative 1—On-Alignment Capacity Expansion (from four to six lanes) in Downtown Lawrenceburg*

This solution requires three through lanes plus dual left-turn lanes and exclusive right-turn lanes at major intersections in the City of Lawrenceburg. The proposal addresses congestion through Lawrenceburg and improves the LOS to an acceptable level. Projected 2030 LOS for intersections in this portion of US 50 for Alternative 1 are provided in Table 3.04-1.

Alternative 1 will have major business impacts on the north side of US 50 and will require approximately 4.0 acres of new R/W. This alternative is expected to require 10 to 15 relocations and impact a minimum of ten historic structures in two historic districts. The total construction cost of this alternative is estimated at \$20 million (yr 2017 dollars).

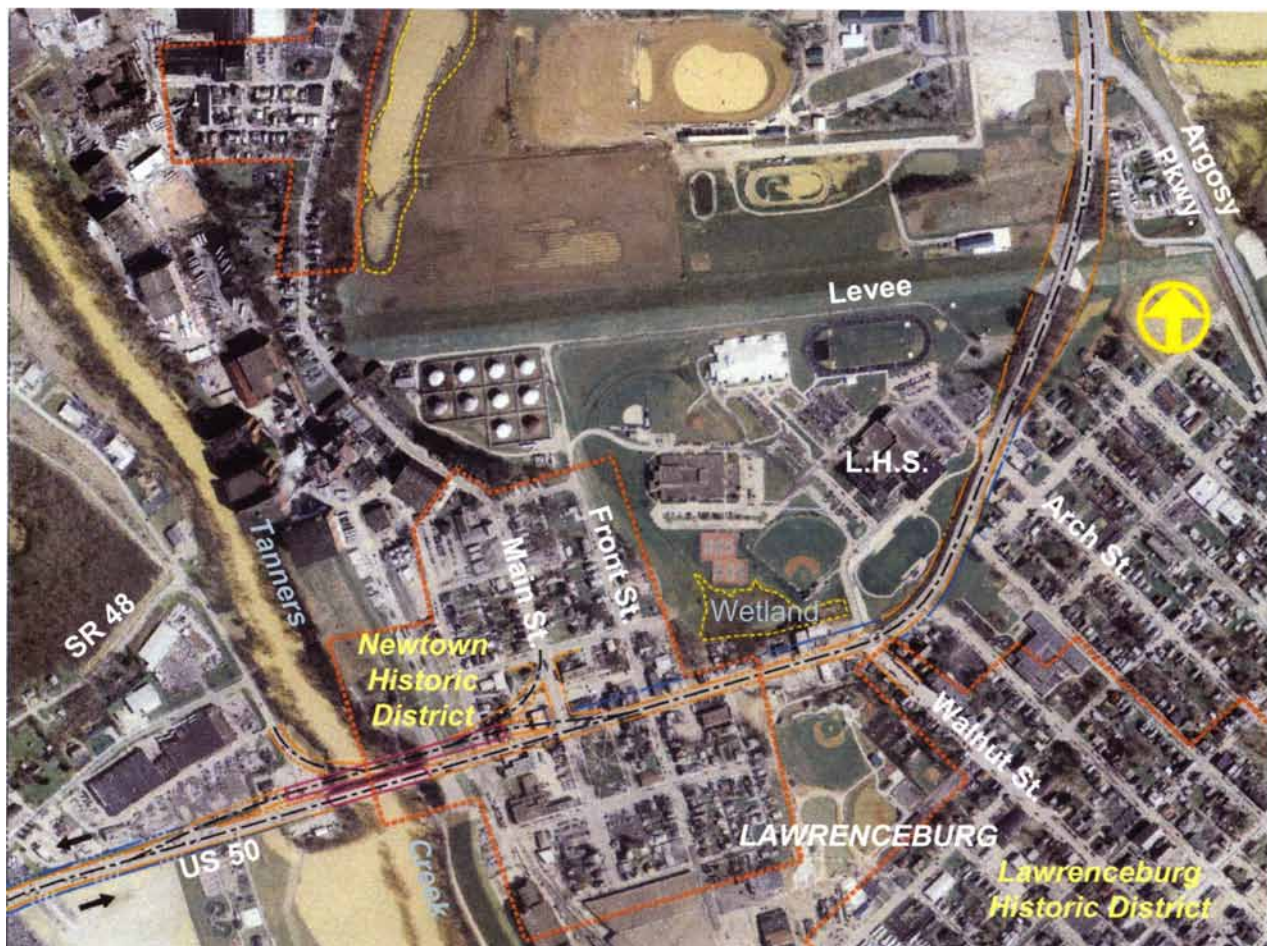


Figure 3.04-2 Alternative 1

The safety need for this project is satisfied by improvements to the Arch Street Intersection. Congestion and corridor improvements also satisfy need. Although historical site impacts are expected along with other building relocations, this project satisfies purpose and need for improvement of the corridor, and proposed improvements along the existing alignment make this a viable alternative for improvement of US 50. Alternative 1 is recommended for further evaluation.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Main Street	LOS B		LOS A	
US 50 and Front Street	LOS B	NBL SBL	LOS D	NBL, NBT SBL EBT
US 50 and Walnut Street	LOS A	NBL SBL	LOS A	NBL SBL
US 50 and Arch Street	LOS A	WBL	LOS A	SBL EBL WBL
US 50 and Argosy Parkway	LOS B	NBL SBL EBL WBL	LOS B	NBL SBL EBL WBL

Note: NBL = Northbound Left NBT = Northbound Through NBR = Northbound Right
SBL = Southbound Left SBT = Southbound Through SBR = Southbound Right
EBL = Eastbound Left EBT = Eastbound Through EBR = Eastbound Right
WBL = Westbound Left WBT = Westbound Through WBR = Westbound Right

Table 3.04-1 2030 Alternative 1 Intersection Operations from Synchro

2. Alternative 4—One-Way Pair (South)

This Alternative proposes a one-way pair to the south of US 50 through Lawrenceburg that provides three-lane one-way streets with short turn lanes at intersections. The alternative improves the LOS to an acceptable level.

Significant impacts will be experienced with this option because of extensive new roadway and local street reconfigurations. Historic district impacts are also significant. This solution will require approximately 20 acres of new R/W, including 3 acres of wetlands, and 30 to 40 relocations. The total construction cost is estimated at \$45 million (yr 2017 dollars).

This project improves LOS in the corridor and satisfies project needs. However, because of significant impacts, including R/W requirements, historic site impacts, and excessive cost, this alternative is not recommended for further evaluation.



Figure 3.04-3 Alternative 4

3. Alternative 5—One-Way Pair (Near North)

This alternative proposes a one-way pair to the near north of US 50 through Lawrenceburg that provides three-lane one-way streets with short turn lanes at intersections. It also includes expansion of US 50 from four to six lanes from the one-way split to Argosy Parkway. The alternative improves the 2030 LOS to an acceptable level.

This option covers a total length of 1.1 miles and requires new roadway construction and local street reconfiguration. It is expected to require 1.5 acres of new R/W, including 0.3 acres of wetlands. Alternative 5 will also require four to five relocations and, if constructed today, would impact a minimum of twenty structures listed as notable, outstanding, or contributing in the Dearborn County Interim Report. Impacts to historic structures should be considerably less for this project, presuming the proposed additional bridge over Tanners Creek is constructed prior to this project. The total construction cost is estimated at \$24 million (yr 2017 dollars).

A summary of overall intersection operations and specific movements of LOS D from Synchro modeling for this alternative follows in Table 3.04-2. As shown, overall intersection operations for major intersections in this segment are at a sufficient level to demonstrate this project satisfies purpose and need.



Figure 3.04-4 Alternative 5

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Main Street	LOS B		LOS C	
Main Street and Fourth Street	LOS A		LOS B	
US 50 and Front Street	LOS A		LOS B	
Front Street and Fourth Street	LOS B		LOS B	
US 50 and Walnut Street	LOS A		LOS A	
US 50 and Arch Street	LOS A		LOS A	
US 50 and Argosy Parkway	LOS B	NBL, SBL EBL, WBL	LOS B	NBL, SBL EBL, WBL

Note: NBL = Northbound Left NBT = Northbound Through NBR = Northbound Right
SBL = Southbound Left SBT = Southbound Through SBR = Southbound Right
EBL = Eastbound Left EBT = Eastbound Through EBR = Eastbound Right
WBL = Westbound Left WBT = Westbound Through WBR = Westbound Right

Table 3.04-2 2030 Alternative 5 Intersection Operations from Synchro

Travel Demand Modeling performed by Wilbur Smith Associates was also used to evaluate this alternative. The purpose of the modeling was to forecast future US 50 travel, estimate the effects of future development impacts on Dearborn County's arterial/major collector roadway network, and evaluate select alternatives developed to address congestion with the corridor. The full report from Wilbur Smith is included in this report as Appendix A. A summary of the results is provided in this section.

To evaluate Alternative 5, a number of capacity assumptions were made for the alignment, and these are analyzed using scenarios 5a, 5b, and 5c:

Scenario 5a is a conservative analysis, which assumes that despite the addition of a lane in each direction, operational considerations allow only a modest improvement in capacity, from 2,320 to 2,700 vph per direction, only on the one-way links.

Scenario 5b assumes a design more successful in improving capacity, with final capacities of 3,500 vph per direction. As with Scenario 5a, only the newly coded one-way links are affected.

Scenario 5c represents a very aggressive campaign to improve capacity through downtown Lawrenceburg as well as Greendale. Capacities on the one-way couplet links are improved to 5,000 vph per direction. In addition, the segments of US 50 between the one-way couplet and the I-275 ramps (e.g., the sections through Greendale) are improved from a capacity of 2,320 to 3,500 vph per direction. Finally, capacity on the easternmost segment of SR 1, between Ridge Avenue and US 50—a consistent bottleneck in scenarios where it is unaltered—is improved from 1,350 to 2,700 vph/dir.

It should be stressed that, in the basic subnetwork used for this project, the Tanners Creek Bridge is a singular connection between two sets of the submodel's TAZs. All trips wishing to pass from one side of the subarea to the other must use this link; there is no alternative route. Additionally, the analysis methodology involves assigning predetermined trip tables to alternative networks and excludes trip generation and distribution. As a result, any scenario that adds capacity but no new alignment, such as Alternative 5, will not show any changes in volume on the Tanners Creek Bridge, and volume changes on other parts of the US 50 corridor represent a shift to or from other routes. The Tanners Creek Bridge link volumes will be the same in the scenario output as in the base, and the sum of corridor volumes on US 50 and parallel links will also remain constant.

The Alternative 5 scenarios are nonetheless useful to show the effect that improvements in capacity have on travel time and congested speeds. Table 3.04-3 shows improvements in travel time and speed on US 50 between the intersection with Old US 50 to the west and the SR-1/I-275 interchange to the northeast.

Scenario 5a, Modest Capacity Increase: If the Scenario 5a improvements had been in place in the year 2000, they would have had only a minor impact, improving travel time and speed by only five percent westbound (WB) and one percent eastbound (EB). However, by the year 2030, the model predicts that without any improvements, average congested speeds will fall by more than half, and travel times will more than double. With the Scenario 5a improvements in place in 2030, travel times are 24 percent lower and average speed 33 percent higher than without them, though congestion is still markedly higher than in the 2000 scenario.

During the AM and PM peak periods, the benefits of the Scenario 5a improvements are more pronounced in the peak directions. During the AM peak, the improvements deliver a 38 percent improvement in travel time and 62 percent improvement in average speed in the eastbound lanes of the Lawrenceburg/Greendale segment of US 50. During the PM peak, the travel time and speed improvements in the westbound direction are 29 percent and 43 percent, respectively.

Scenario 5b, Intermediate Capacity Increase: With the Scenario 5b improvements in place, travel time and speed in the year 2000 would have been about 6 percent better westbound and 4 percent better eastbound. With the Scenario 5b improvements in place in 2030, travel times are 35 percent lower and average speed 53 percent higher than without them. Congestion is

considerably higher than in the 2000 scenario. During the peak periods, the benefits are again more pronounced in the peak directions, with 47 percent and 89 percent improvements in travel time and average speed, respectively, in the eastbound direction in the morning, and 41 percent and 72 percent improvements westbound in the afternoon.

Scenario 5c, Aggressive Capacity Increases: The Scenario 5c improvements lead to improvements in travel time and speed that are significantly higher than the other scenarios. Even in the year 2000, time and speed would have been improved by about 10 percent in both directions. In 2030, travel times in Scenario 5c are 55 to 60 percent lower and average speeds 120 to 155 percent higher than in the corresponding Do-Nothing scenario. Congestion in 2030 is only slightly worse than in the 2000 scenario and is in fact better than current conditions. During the peak periods, capacity is high enough to accommodate the peak direction traffic without significant impact on highway performance.

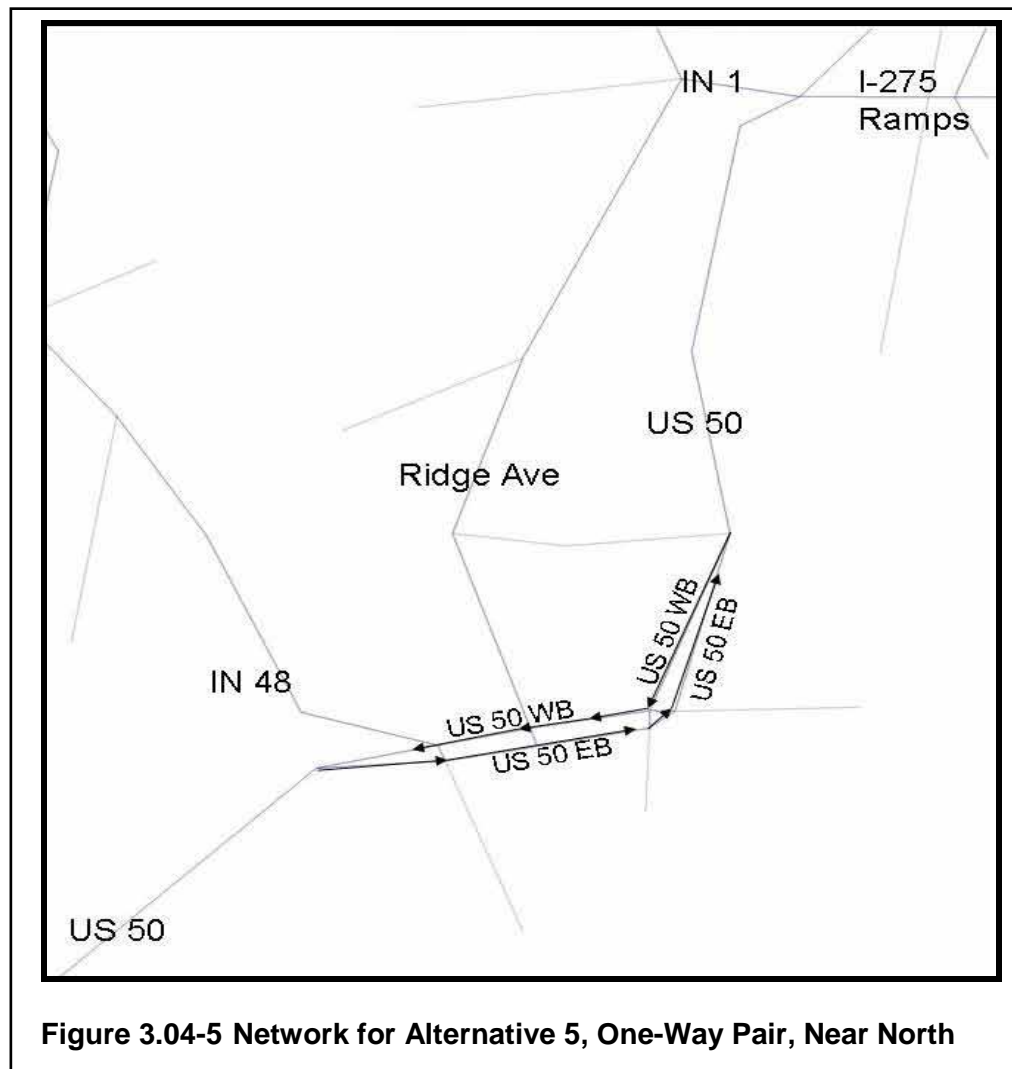


Figure 3.04-5 Network for Alternative 5, One-Way Pair, Near North

Eastbound / Northbound					Westbound / Southbound				
Year 2000					Year 2000, Daily				
	Do-Nothing	5a	5b	5c		Do-Nothing	5a	5b	5c
Travel Time-min	4.71	4.65	4.52	4.3		4.7	4.53	4.45	4.25
Impr over DN	n/a	-0.06	-0.2	-0.41		n/a	-0.17	-0.3	-0.45
Pct Impr	n/a	-1%	-4%	-9%		n/a	-4%	-5%	-10%
Avg. Speed-mph	36.82	37.29	38.36	40.33		36.89	38.81	39.51	41.36
Impr over DN	n/a	0.48	1.5	3.51		n/a	1.91	2.6	4.47
Pct Impr	n/a	1%	4%	10%		n/a	5%	7%	12%
Year 2030					Year 2030, Daily				
	Do-Nothing	5a	5b	5c		Do-Nothing	5a	5b	5c
Travel Time-min	11.54	8.74	7.52	4.5		9.87	7.48	7.05	4.57
Impr over DN	n/a	-2.80	-4.0	-7.04		n/a	-2.39	-2.8	-5.30
Pct Impr	n/a	-24%	-35%	-61%		n/a	-24%	-29%	-54%
Avg. Speed-mph	15.03	19.84	23.06	38.53		17.57	23.50	24.94	38.47
Impr over DN	n/a	4.81	8.0	23.51		n/a	5.93	7.4	20.90
Pct Impr	n/a	32%	53%	156%		n/a	34%	42%	119%
Year 2030					Year 2030, AM Peak Pd				
	Do-Nothing	5a	5b	5c		Do-Nothing	5a	5b	5c
Travel Time-min	15.61	9.66	8.28	4.54		10.42	8.85	7.33	4.58
Impr over DN	n/a	-5.95	-7.3	-11.07		n/a	-1.57	-3.1	-5.84
Pct Impr	n/a	-38%	-47%	-71%		n/a	-15%	-30%	-56%
Avg. Speed-mph	11.11	17.95	20.94	38.19		16.64	19.86	23.98	38.38
Impr over DN	n/a	6.84	9.8	27.09		n/a	3.22	7.3	21.74
Pct Impr	n/a	62%	89%	244%		n/a	19%	44%	131%
Year 2030					Year 2030, PM Peak Pd				
	Do-Nothing	5a	5b	5c		Do-Nothing	5a	5b	5c
Travel Time-min	9.31	7.66	7.04	4.46		9.74	6.89	5.74	4.46
Impr over DN	n/a	-1.65	-2.3	-4.85		n/a	-2.85	-4.0	-5.28
Pct Impr	n/a	-18%	-24%	-52%		n/a	-29%	-41%	-54%
Avg. Speed-mph	18.63	22.64	24.63	38.88		17.80	25.52	30.63	39.42
Impr over DN	n/a	4.01	6.0	20.25		n/a	7.71	12.8	21.61
Pct Impr	n/a	22%	32%	109%		n/a	43%	72%	121%

**Table 3.04-3 Travel Time Savings Resulting from Alternative 5 Improvements
(Scenarios a, b, and c along US 50 between the Intersections with Old
US 50 and I-275)**

Ridge Avenue: Travelers seeking an alternative route to US 50 through Greendale and/or Lawrenceburg may use Ridge Avenue, which intersects US 50 just to the east of the Tanners Creek Bridge, and joins State Road 1 about one-third mile west of US 50 and the I-275 entrance ramps. Those bound to or from I-275 would use the one-third mile segment of SR 1 as part of the bypass as well; those bound westward on SR 1 would relieve traffic from the easternmost segment of SR 1 by using this alternative route. Depending on the policy goals for Ridge Avenue, it may be worthwhile to consider the effects of the scenarios on volume carried by Ridge Avenue.

Improving capacity on US 50 through Lawrenceburg has the effect of reducing traffic on Ridge Avenue and diverting it back to US 50. In Scenario 5a, the effect is negligible, with less than a percent of traffic removed from Ridge Avenue in some time periods. In Scenario 5b, year 2030 traffic on Ridge Avenue falls between three and five percent from the Do-Nothing levels, while in Scenario 5c, about 20% percent of Do-Nothing traffic is diverted back to US 50.

These findings should be kept in mind when reviewing Table 3.04-3 (above). The travel times and speeds reflect not just an increase in capacity but also a countervailing increase in volume because of diversion of Ridge Avenue traffic.

The travel demand modeling and operations modeling prove a strong need for improvements in this segment and show improved operations and decreases in congestion with construction of this alternative. As this alternative provides improvements at generally lower cost than other alternatives for this segment and expected impacts are generally lower, Alternative 5 is moved forward for additional consideration.

4. Alternative 6—One-Way Pair (Mid North)

This new roadway alternative proposes a mid north pair of three-lane, one-way streets with short turn lanes at intersections. This 1.2-mile option provides acceptable LOS along US 50 through the City of Lawrenceburg. Projected intersection operations LOS is provided in Table 3.04-4.

Since new roadway will be constructed for this alternative, extensive R/W (approximately 6.2 acres) will be required, along with five to ten relocations. A significant number of structures listed as notable or outstanding in the Dearborn County Interim report would be impacted. The total construction cost of this alternative is estimated at \$25 million (yr 2017 dollars).

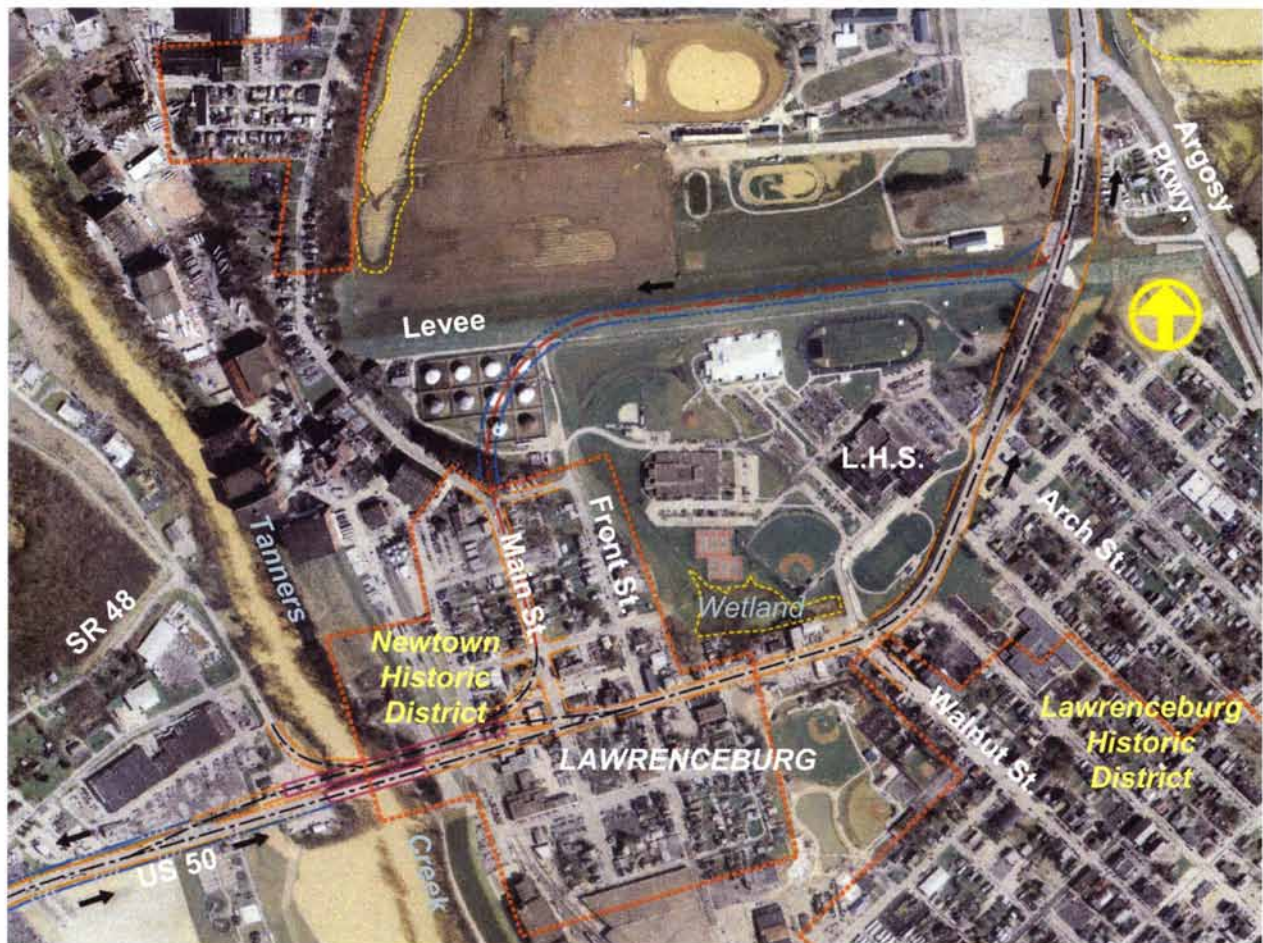


Figure 3.04-6 Alternative 6

As shown below in Table 3.04-4, operations modeling for this alternative indicates this project will result in acceptable LOS to downtown Lawrenceburg while improving safety at Arch Street. Additionally, Travel Demand Modeling results for Alternative 5 can be reasonably assumed to apply to Alternative 6, since these options function essentially the same. As this alternative satisfies purpose and need and has lower cost and environmental and cultural impacts, this project is recommended for further evaluation for improvement of the corridor.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Main Street	LOS B		LOS B	
Main Street and Fourth Street	LOS B		LOS C	
Main Street and Ridge Avenue	LOS B	WBT	LOS C	
US 50 and Front Street	LOS A		LOS B	
Front Street and Fourth Street	LOS A		LOS A	
US 50 and Walnut Street	LOS A		LOS A	
US 50 and Arch Street	LOS A		LOS A	
US 50 and Argosy Parkway	LOS B	NBL, SBL EBL, WBL	LOS B	NBL, SBL EBL, WBL
Note: NBL=Northbound Left SBL = Southbound Left EBL = Eastbound Left WBL = Westbound Left WBT = Westbound Through				
Table 3.04-4 2030 Alternative 6 Intersection Operations from Synchro				

5. Alternative 7—One-Way Pair (Far North)

This alternative proposes a one-way pair to the far north of US 50 through Lawrenceburg and Greendale that provides three-lane, one-way streets with short turn lanes at intersections. The alternative improves the LOS to an acceptable level.

This option requires new roadway construction and local street reconfiguration. The overall length and separation of the two routes also requires construction of new connector streets. This is expected to require 16.5 acres of new R/W, including 1.2 acres of wetlands. Alternative 7 will also require 35 to 40 relocations, including an estimated 30 historic structures in two districts. The total construction cost is estimated at \$47 million (yr 2017 dollars).

Although this alternative will provide an acceptable LOS for the corridor, because of the significant environmental and cultural impacts and high construction cost, this alternative is not being advanced for further study.



Figure 3.04-7 Alternative 7

6. *Alternative 8—SR 1 to SR 48 Connector (Nowlin Avenue)*

Alternative 8 investigated a new roadway that connects SR 1 to SR 48, which reflects a local agency project being developed by the City of Lawrenceburg. This option was considered in this US 50 Corridor Study for the sole purpose of determining whether the local project would have a positive impact on congestion through Lawrenceburg.

For construction of this alternative, approximately 70 acres of new R/W would be required, with five to ten relocations expected. Potentially significant environmental impacts could also be expected as a result of this alternative. The total construction cost is estimated at \$37 million (yr 2010 dollars).

For Travel Demand Modeling, the Alternative 8 scenarios (slow and fast) represent a situation where the Tanners Creek Bridge is no longer a singular connection between two areas of the submodel. Therefore, diversion from US 50 in Lawrenceburg is possible. Nonetheless, the sum

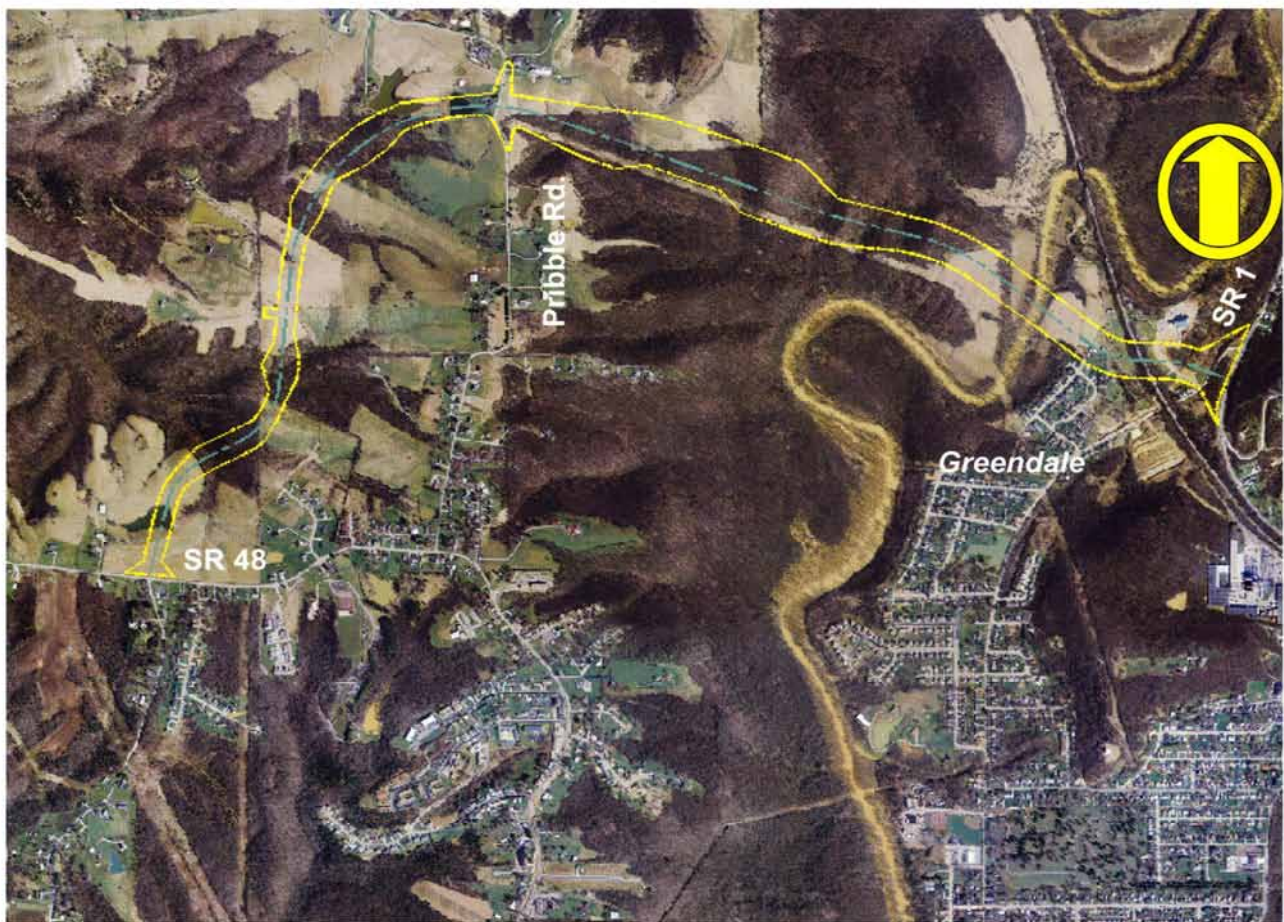


Figure 3.04-8 Alternative 8

of volumes on the Tanners Creek Bridge and new bypass links will equal the total volume on the Tanners Creek Bridge link in a corresponding Do-Nothing scenario.

Volumes: Both the fast and slow bypass scenarios succeed at removing a margin of traffic from US 50 in downtown Lawrenceburg. Table 3.04-5 shows daily volumes at various key points in the study area, as predicted by Do-Nothing, fast bypass, and slow bypass scenarios in 2000 and 2030. The table demonstrates a number of observations:

1. On the critical Tanners Creek Bridge link, the slower bypass is predicted to remove about 4,400 daily trips, or about 10.5 percent, from the anticipated 2030 volume. The faster bypass is predicted to remove another ~2,200 daily trips, for a reduction of 14 percent.
2. Farther east on the opposite side of Lawrenceburg, the faster bypass removes over 15 percent of Do-Nothing traffic, while the slower alternative removes only about 3.5 percent. This large difference is compensated partially by higher volumes on Ridge Avenue in the fast bypass scenario, which reflect differing equilibrium assignments in the two scenarios. To some extent, though, this difference indicates that the faster, higher-capacity roadway induces trips originating in Lawrenceburg to go the longer way around to reach some destinations along SR 48 and SR 148, while in the slower bypass scenario, these trips still use the Tanners Creek Bridge.
3. On US 50 just west of SR 148, traffic is slightly *higher* with the bypass than without it. This is because traffic coming through Aurora and bound for locations along SR 48, which had traveled up SR 148, now takes US 50 to SR 48. This is due not to the main bypass link, but to the new, westward connection between US 50 and SR 48.
4. Despite the substantial use of the bypass, traffic on SR 48 near its junction with US 50 (but before the split between old and new intersecting links) actually falls with the bypass in place. This speaks to the traffic demand pattern. The bypass link serves almost exclusively to carry traffic generated by or attracted to areas north of US 50, along SRs 48 and 148 (TAZs 4-7, and 26), and points outside the study area to the northwest on SR 48. The total traffic exchanged between these locations and the vicinity of the I-275 ramps now uses the bypass, and no longer has to endure the congestion on US 50 through Lawrenceburg.
5. These results are also observed when the AM and PM peak periods are analyzed, and as one would expect, they tend to be more pronounced in the peak directions. For detail on the peak period volumes, see Appendix VII of the Wilbur Smith report in Appendix A of this document.

Through Trips: As mentioned in the last point above, the new bypass alignment serves mostly local traffic originating in areas north of US 50 along SRs 48 and 148. In fact, a select link analysis indicates that the slower bypass link carries no through traffic at all. The faster alignment is projected to carry some through trips, particularly during peak periods. In the AM peak, about 230 of the projected 1,175 trips eastbound on the fast bypass are through trips.

This is almost 20 percent. In the non peak direction the percentage of through trips is about 50 trips, for five percent of bypass use in that direction. In the PM period, the projected through trip percentages are only 6.5 percent in the peak direction and under five percent in the off-peak.

		Traffic Count (2001)	Do Nothing 2000	Do Nothing 2030	60 mph Bypass (8b) 2000	60 mph Bypass (8b) 2030	42 mph Bypass (8a) 2030
	Location						
US 50	West of SR 48	35,550	33,891	49,973	34,569	50,575	50,040
US 50	Tanners Creek Bridge	41,930	41,916	60,856	36,595	52,182	54,414
US 50	Bet. Argosy Pkwy & I-275 Ramps	34,950	34,373	47,806	30,733	40,509	46,180
US 50	East of SR 1	13,600	14,848	25,778	14,848	25,778	25,778
I-275	Entrance/Exit Ramps	Unknown	47,450	76,869	47,450	76,869	76,869
By-pass	N of US 50 @ SR 1	13,970	20,121	32,427	24,273	39,662	34,112
By-pass	New Segment	N/A	-	-	5,321	8,674	6,442
By-pass	N of US 50 @ SR 48	12,640	12,203	15,913	7,560	8,547	9,538
Ridge Ave	S of SR 1 (N end)	Unknown	12,255	22,137	10,714	21,006	17,451
Ridge Ave	N of US 50 (S. end)	Unknown	11,877	20,057	10,213	18,511	15,552

Table 3.04-5 Traffic Volumes at Key Locations for Alternative 8 (Scenarios a and b, as Compared to Traffic Counts and Corresponding Do-Nothing Volumes)

Travel Times: Table 3.04-6 shows the congested travel times and speeds for the Daily, AM Peak, and PM Peak scenarios for Alternative 8, in both the base and future years, compared to corresponding Do-Nothing scenarios. The table shows that if Scenario 8b (the faster bypass) had been in place in the year 2000, it would have had a moderate impact, improving travel time and speed by 6 and 8 percent in each direction. By the year 2030, the model predicts that without any improvements, average congested speeds will fall by more than half, and travel times will more than double. With the Scenario 8b bypass in place in 2030, travel times are about 40 percent lower and average speed is higher by 70 percent, westbound, and 80 percent, eastbound, than without them. Congestion is somewhat higher in Scenario 8b than in the base (2000 Do-Nothing) scenario but is much closer to the base values than the 2030 Do-Nothing values.

During the AM and PM peak periods, the congestion benefits of the Fast Bypass (8b) are more pronounced in the peak directions and are greater than the percentage improvements in the daily scenario. During the AM peak, the Scenario 8b improvements deliver a 46 percent improvement in travel time and 85 percent improvement in average speed in the eastbound lanes of the Lawrenceburg/Greendale segment of US 50. During the PM peak, the travel time and speed improvements in the westbound direction are 26 percent and 36 percent, respectively.

US 50	Eastbound/Northbound				Westbound/Southbound		
Year 2000		Year 2000, Daily					
	Do-Nothing	8a	8b		Do-Nothing	8a	8b
Travel Time (min)	4.71	4.67	4.41		4.70	4.62	4.4
Impr over DN	n/a	-0.04	-0.30		n/a	-0.08	-0.30
Pct Impr over DN	n/a	-1%	-6%		n/a	-2%	-6%
Avg Speed (mph)	36.82	37.13	39.32		36.89	38.05	39.95
Impr over DN	n/a	0.32	2.50		n/a	1.16	3.06
Pct Impr over DN	n/a	1%	7%		n/a	3%	8%
Year 2030		Year 2030, Daily					
	Do-Nothing	8a	8b		Do-Nothing	8a	8b
Travel Time (min)	11.54	8.89	6.42		9.87	7.54	5.9
Impr over DN	n/a	-2.65	-5.12		n/a	-2.33	-3.97
Pct Impr over DN	n/a	-23%	-44%		n/a	-24%	-40%
Avg Speed (mph)	15.03	19.51	27.01		17.57	23.32	29.80
Impr over DN	n/a	4.48	11.98		n/a	5.75	12.23
Pct Impr over DN	n/a	30%	80%		n/a	33%	70%
Year 2030		Year 2030, AM Peak Period					
	Do-Nothing	8a	8b		Do-Nothing	8a	8b
Travel Time (min)	16.39	11.58	8.88		7.90	6.69	6.25
Impr over DN	n/a	-4.81	-7.51		n/a	-1.21	-1.65
Pct Impr over DN	n/a	-29%	-46%		n/a	-15%	-21%
Avg Speed (mph)	11.90	16.84	21.96		24.68	29.15	31.20
Impr over DN		4.94	10.06		n/a	4.46	6.52
Pct Impr over DN		42%	85%		n/a	18%	26%
Year 2030		Year 2030, PM Peak Period					
	Do-Nothing	8a	8b		Do-Nothing	8a	8b
Travel Time (min)	8.33	6.86	6.52		10.53	8.57	7.84
Impr over DN	n/a	-1.47	-1.81		n/a	-1.96	-2.69
Pct Impr over DN	n/a	-18%	-22%		n/a	-19%	-26%
Avg Speed (mph)	23.41	28.43	29.91		18.52	23.03	25.18
Impr over DN	n/a	5.02	6.50		n/a	4.52	6.66
Pct Impr over DN	n/a	21%	28%		n/a	24%	36%

**Table 3.04-6 Travel Time Savings Resulting from Alternative 8
(Improvements for Scenarios a and b along US 50 between
the Intersections with Old US 50 and I-275)**

The Fast Bypass scenario delivers better travel time savings in downtown Lawrenceburg than Scenario 5, which directly improves capacity on US 50. This may or may not reflect reality since, as noted, Scenario 5 assumes only a moderate increase in traffic capacity from 2,320 to 2,700 vph in each direction.

Ridge Ave: As discussed earlier, Ridge Avenue serves as an alternate route to US 50 through Greendale and/or Lawrenceburg, from the east side of the Tanners Creek Bridge to the I-275 entrance ramps. Scenario 8a has the impact one would anticipate on Ridge Avenue; volumes drop as trips are displaced to the bypass link or to US 50. In the 2030 scenario, daily traffic on Ridge Avenue is about 20 percent lower than in the corresponding Do-Nothing scenario.

The faster bypass scenario (8b) shows a surprising result. Although the faster bypass carries more volume than the slower bypass, Ridge Avenue also carries more volume in the faster bypass scenario than in the slower. This indicates that the fast bypass is attractive enough to divert trips from generators at or near the southern end of Ridge Avenue which would otherwise use the US 50 bridge across Tanners Creek. These trips instead find it more expedient to follow Ridge Avenue to State Route 1 to the new bypass link to reach their destinations.

Operations modeling of this alternative does not support the conclusion that this alternative will relieve sufficient volume of traffic for the corridor to perform at acceptable levels of service, which does not support the purpose and need. Other proposed alternatives provide higher levels of service and at lower cost.

Additionally, the operations of SR 1 were not investigated for the increased traffic expected on this route if a connector is constructed. It is anticipated that the increase of traffic on SR 1 will cause additional safety and congestion concerns on this roadway, possibly warranting improvements to SR 1, that are not included in the cost estimate of this alternative.

Because of these conclusions, significant R/W requirements, wetland impacts, and high construction costs, Alternative 8 is not being advanced for further evaluation.

It should be noted, however, that while this alternative does not satisfy purpose and need for the US 50 corridor as established by this study, this project may still have significant value as a local project. The conclusion of this study should in no way impact the pursuit of this project at the local level.

7. Alternative 9—SR 1 to SR 48 Connector (Indiana Glass)

Alternative 9 investigated a new roadway that connects SR 1 to SR 48, which, like Alternative 8, reflects a local agency project being developed by the City of Lawrenceburg. This option was considered in this US 50 Corridor Study for the sole purpose of determining whether the local project would have a positive impact on congestion through Lawrenceburg.

This alternative, although providing an alternative route, will not improve the LOS through Lawrenceburg, according to operations modeling performed. Similar Travel Demand Modeling results from evaluation of Alternative 8 can also be reasonably presumed to apply to this alternative, since these options function similarly. Possible geometric improvements to SR 1 because of increased traffic on this roadway were not investigated during this study but may be required, thus increasing potential costs of this alternative.

Approximately 71 acres of new R/W would be required, including 0.6 acres of wetlands, with five to ten relocations expected. The total construction cost is estimated at \$36 million (yr 2010 dollars). Because of these impacts, cost, and the fact this alternative does not satisfy purpose and need, this alternative is not recommended for further evaluation.

Similar to Alternative 8, this alternative does not satisfy purpose and need for the US 50 corridor as established by this study. However, this project may still have significant value

as a local project. The conclusion of this study should in no way impact the pursuit of this project at the local level.



Figure 3.04-9 Alternative 9

8. *Alternative 10–New Ohio River Bridge (US 50 to KY 20)*

This alternative proposed a new crossing of the Ohio River connecting US 50 in Indiana with I-275 in Kentucky. This alternative included 7 miles of new, four-lane roadway that would improve the LOS to an acceptable level in Lawrenceburg.

This option would have significant impacts. Approximately 120 acres of new R/W is required, including seven to eight acres of wetlands, with 45 to 50 relocations expected. The construction cost of this option is estimated at \$750 million (yr. 2017 dollars)

This alternative satisfies purpose and need by reducing congestion, improving safety at Arch Street, and enhancing the corridor. This alternative is not recommended for further evaluation, however, because of the excessive cost and significant impacts involved.



Figure 3.04-10 Alternative 10

3.05 SEGMENT 4—GREENDALE (ARCH STREET to I-275)

Segment 4 is the easternmost section of the investigated corridor. This segment is defined by Arch Street to the west and I-275 to the east and has a total length of 1.5 miles. One residence listed on the National Register is located on US 50 within this segment.

Segment 4 currently operates adequately with the exception of the US 50/SR 1/I-275 (Bellevue Road) intersection. This intersection operates at LOS F overall during the PM peak hour. Vehicles making turns at this intersection experience long queues and traffic signal cycle failure (waiting through more than one signal cycle before getting through the intersection). Future traffic levels should be able to function adequately across Segment 4, except for the US 50/SR 1/I-275 intersection, which will experience extreme delays and queuing due to congestion.

Because of the existing and forecasted acceptable LOS of this segment, only improvement to the intersection of US 50 and I-275 was investigated.



Figure 3.05-1 Segment 4

A No-Build Alternative

Since the current intersection operates at LOS F during PM peak hours, a No-Build alternative will not allow for proper flow of traffic in any future scenario. The No-Build alternative will not satisfy purpose and need for this intersection.

B Short-Term Improvements

1. *Access Management*

Access control and management solutions are recommended for short-term improvements for safety and congestion in this segment. Access management solutions are presented in the Gateway Study prepared by OKI and Dearborn County.

C. Long-Term Improvements

1. *Access Management*

Access management solutions should also be considered in any long-term planning for this section. The Gateway Study provides solutions for such management to improve safety and congestion in this segment.

2. *Intersection Improvements—US 50 at I-275 Interchange*

This intersection improvement proposes triple left-turn lanes from I-275 westbound and dual left-turn lanes for all other movements. This option increases the LOS for this intersection to acceptable levels, as shown in Table 3.05.

This proposed improvement will require approximately 4.0 acres of new R/W, with two to three commercial property relocations. The total construction cost is estimated at \$28 million (yr 2017 dollars).

Since operations assessment of this alternative indicates this will provide an acceptable 2030 LOS, this satisfies purpose and need. This alternative is recommended for advancement and further study.



Figure 3.05-2 Intersection Improvement—US 50 at I-275 Interchange

SECTION 4
ENVIRONMENTAL AND CULTURAL CONSIDERATIONS

4.01 ENVIRONMENTAL AND CULTURAL CHARACTERISTICS

A. Physical Environment

Dearborn County lies within the Dearborn Upland physiographic region of Indiana; this is a dissected plateau underlain by flat-lying shales and limestones. The landscape is varied, with large tracts of forested areas punctuated by rolling hills and valleys, as well as flatlands and shoreland area along the Ohio River. Numerous small headwater streams run through the county; Tanners Creek is the largest stream running through the project area. The US 50 corridor study area generally lies within the flatland area of the county, and none of the recommended alternatives will impact forest land.

Karst topographic features exist in the northwest portion of Dearborn County; no proposed alternatives are located in this section of the county. Since no known karst features exist within the project area, it is not expected there will be any impacts to karst features.

Nearly all of Dearborn County lies within an area of essentially non-aquifer materials. Near the Ohio River, throughout much of the City of Lawrenceburg, a buried sand and gravel aquifer exists. This aquifer varies from 35 to 150 feet in thickness and is typically overlain by clay, silt and fine sand of varying thickness. The buried sand and gravel aquifer is a very productive water-bearing unit. No impact to this aquifer is anticipated from any of the recommended alternatives.

B. Cultural Resources

Dearborn County is part of the Tri-State region and its proximity to the larger metropolis of Cincinnati allows residents to benefit from the more varied and numerous cultural activities found in a larger city. Local attractions such as Argosy Casino and Perfect North Slopes are large tourist attractions; the City of Lawrenceburg is home to the Dearborn County Historical Society Museum, Dearborn Heights Arts Council and County Fairgrounds; various festivals and events occur at the Fairgrounds during the year.

Newtown Park is located along US 50 West and Main Street in Lawrenceburg. R/W may have to be acquired for improvements to this stretch of the corridor for Alternatives 1, 5 and 6. No funds from the Land & Water Conservation Act have been used for improvements to this facility.

C. Environmental Justice

The latest census figures for the county are that 98.06 percent of the population is Caucasian, with the largest minority populations being African-American at 0.62 percent, followed by Hispanic at 0.58 percent. Although it is not anticipated that any of the recommended alternatives will present any environmental justice concerns, this issue will be more fully explored when alternatives are moved forward for more in-depth study. Several of the alternatives will require relocations.

D. Terrestrial Habitat/Endangered Species

The project areas for the alternatives that have been selected to move forward occur within the urban areas of Aurora and Lawrenceburg and should not have an adverse effect on terrestrial habitat.

Dearborn County is within the range of the federally endangered Indiana bat (*Myotis sodalis*), the federally threatened bald eagle (*Haliaeetus leucocephalus*), and the federally endangered running buffalo clover (*Trifolium stoloniferum*). There are no eagle nests in Dearborn County (per the United States Fish and Wildlife Service) and none of the recommended alternatives are known to lie within the habitat of the Indiana bat or running buffalo clover.

E. Archaeological Consideration

A Phase Ia archaeological literature review was completed by Archaeological Consultants of the Midwest, Inc. for the project corridor. This research was conducted as a preliminary check for potential archaeological concerns. The purpose of the review is to determine whether the study area, or any part of it, has been professionally surveyed, and identify documented archaeological sites, architectural properties, cemeteries, sites on or potentially eligible for listing on the National Register, and buildings or structures recorded on the early cartographic sources in the study area.

Based on this research, 40 Phase Ia, 12 Phase Ic, and two Phase II investigations have been undertaken in the study area. 148 sites have been inventoried in the study area, and temporal affiliation of the prehistoric sites indicates the area has been occupied throughout prehistory. Examination of architectural property maps indicate that 135 architectural properties have been documented in the study area. Review of the National Register indicates 15 properties and two historic districts on the National Register are located near the corridor. Historic cartographic sources indicate that numerous buildings or structures have been documented in the study area.

Potential impacts to archaeological sites will be investigated further as alternatives are advanced. Additional information on potential historic structure and historic district impacts are discussed in greater detail in Section 4.05 of this report.

F. Floodplains

The majority of the eastern portion of the project corridor lies within the 100-year floodplain. The US 50 and I-275 interchange is within the floodplain, and US 50 exists in the floodplain until approximately one mile west of Aurora, near the intersection of US 50 and Stewart Street, with the exception of a short stretch of the roadway in downtown Lawrenceburg. The downtown area is surrounded by a levee, which removes this area from the floodplain. No floodplains exist west of the US 50/Stewart Street intersection. Potential impact from or to the floodplain by recommended alternatives will be investigated further as alternatives are advanced.

G. Air

The sections of US 50 identified in this report as Segments 3 and 4 and the eastern portion of Segment 2 lie within Lawrenceburg Township. Lawrenceburg Township is that portion of Dearborn County which is designated a non-attainment area for ozone and PM_{2.5}. The final design, concept and scope for any alternatives chosen to move forward for further study which lie within Lawrenceburg Township will be required to conform to the State Implementation Plan (SIP) and to be included in OKI's Transportation Improvement Plan.

H. Noise

A formal noise analysis will be required for any alternative which provides new alignment or increases the number of through traffic lanes. Noise abatement measures will be required for any alternative that is found to have a "noise impact" as defined by INDOT's noise policy.

4.02 PUBLIC INVOLVEMENT

As part of INDOT's policy of public involvement and to ensure that requirements of the National Environmental Policy Act (NEPA) were fulfilled, several opportunities for stakeholder participation have been provided. A Community Advisory Committee (CAC), comprised of local government officials, economic development groups, local businesses, neighborhood groups, and other interested parties in the Dearborn County area was established, and meetings were held to provide both a general vision of the corridor study and to request feedback on potential alternatives developed. The CAC meetings provided stakeholders with the opportunity to evaluate developed alternatives and also to provide alternative solutions.

More general public participation was solicited through the vehicle of Public Information (PI) Meetings. Both venues also provided attendees the ability to present written comments which became part of the environmental document of the study. All Public Information meetings and CAC discussions were held in Lawrenceburg. Copies of minutes of CAC and PI meetings and written comments received are provided in Appendices C, D, and E.

Section 106 of the National Historic Preservation Act (NHPA) requires that as part of the effort to identify historic properties, those persons or groups who could have meaningful input be given the opportunity to participate as Consulting Parties. The following table lists those persons or groups who were contacted and provided information regarding the US 50 Corridor Study as part of the Section 106 process. The only response received was from the State Historic Preservation Officer, who could not identify any additional organizations to be contacted. Several persons on this list were also invited to participate as part of the CAC group.

Agency	Contact Person	Title	Date Contacted	Response Received
Indiana Department of Natural Resources	Kyle Hupner	SHPO	11/17/06	1/19/07
Historic Landmarks Foundation	Kent Abraham		11/17/06	none
	Chris McHenry	Dearborn County Historian	11/17/06	none
Aurora Historic Preservation Commission	Chris Baltz	Chairperson	11/17/06	none
Main Street Aurora		Director	11/17/06	none
Dearborn County Historic Society	Francis Egner		11/17/06	none
Lawrenceburg Main Street	John Roberts	President	11/17/06	none
Dearborn County Trust for Historic Preservation	Allan Cornelius		11/17/06	none
Carnegie Historic Landmarks Preservation Society	Phyllis McKeown		11/16/06	none
Surveyors Historic Society	Roger Woodfill		11/16/06	none

Table 4.02-1 List of Contacts for Section 106 of NHPA

General information on the US 50 EA/CS is available to everyone via the Internet; the INDOT website has a site dedicated to the US 50 Study. This site provides a schedule of past meeting dates, meeting minutes of CAC and PI Meetings, as well as notices of upcoming meeting dates and times. The website also provides the opportunity for the public to e-mail concerns or comments directly to the INDOT Project Manager. The link to the US 50 site is www.in.gov/dot/div/projects/us50/dearborn.

4.03 AGENCIES CONTACTED

Numerous state and federal agencies were contacted during the early coordination phase of this project. The purpose of this coordination is to allow agencies to provide comments and raise questions or concerns regarding the purpose and need of proposed projects, as well as discuss potential environmental and cultural concerns for the projects. The contacted agencies were provided with information packages including early alternatives with preliminary alternative screening information, potential environmental, cultural and historic impacts, and information on the project purpose and need. The following is a list of each agency and person contacted.

Agency	Division	Contact Person	Title	Address
Natural Resource Conservation Service		Ms. Jane Hardisty	State Conservationist	6013 Lakeside Boulevard. Indianapolis, IN 46278
Indiana Geological Survey	Environmental Geology Section	Ms. Nancy Hasenmueller	Section Head	611 North Walnut Grove Bloomington, IN 47405
US Department of the Interior	National Park Service	Mr. Ernest Quintana	Regional Director	1709 Jackson Street Omaha, NE 68102
Indiana Department of Transportation	Intermodal Transportation Division	Mr. Jim Keefer	Manager, Aeronautics Section	Indiana Government Center North Room N901 100 North Senate Avenue Indianapolis, IN 46204
Hoosier National Forest		Mr. Kenneth G. Day	Forest Supervisor	811 Constitution Avenue Bedford, IN 47421
US Fish and Wildlife Service	Bloomington Field Office	Mr. Scott E. Pruitt	Field Supervisor	620 South Walker Street Bloomington, IN 47403
Indiana Department of Natural Resources	Division of Fish and Wildlife	Ms. Christie L. Stanifer	Environmental Coordinator	Indiana Government Center South Rm W264, 402 West Washington Street Indianapolis, IN 46204
Federal Highway Administration		Mr. Larry Heil, PE	Project Manager	Federal Office Building 575 N. Pennsylvania Street Indianapolis, IN 46204
Indiana Department of Transportation	Seymour District	Mr. Bob Williams	District Director	P.O. Box 550 Seymour, IN 47274
US Army Corps of Engineers	Louisville District	Mr. Doug Shelton		P.O. Box 53 Louisville, KY 40201
Indiana Department of Environmental Management		Mr. Thomas W. Easterly	Commissioner	Indiana Govt Center North, Rm N1301, 100 North Senate Avenue Indianapolis, IN 46204
Indiana Department of Transportation	Environmental Assessment Section	Mr. Ben Lawrence	Acting Manager	Indiana Government Center North Room N642 100 North Senate Avenue Indianapolis, IN 46204
Environmental Protection Agency, Region V	Environmental Review Section	Ms. Virginia Laszewski	Manager	77 West Jackson Boulevard. (B-19J) Chicago, IL 60604

Table 4.03-1 List of Agencies Contacted

4.04 AGENCY COMMENTS

Several agencies provided specific comments following review of provided information. In general, limited concerns were raised regarding project alternatives, since the majority of alternatives being advanced for further evaluation involve existing alignments and already disturbed urban areas. The specific comments provided by these agencies are summarized in Table 4.04. Copies of responses are provided in Appendix B.

Agency	Division	Responder	Title	Comments
Natural Resource Conservation Service		Byron Nagle		Byron called with a question regarding possible r/w take of prime farmland. Limited impacts expected
Indiana Geological Survey	Environmental Geology Section	Marni D. Karaffa	Geologist	The activities you have described should not be affected by, nor have an affect on the geology of the area.
US Department of the Interior	National Park Service	No name provided	Regional Environmental Coordinator	No comments on proposed action.
Indiana Department of Transportation	Intermodal Transportation Division	Justin Klump	Project Manager	This project should have no impact on airspace or air navigation
Hoosier National Forest		Keno Cole		No comments on proposed action.
US Fish and Wildlife Service	Bloomington Field Office	Scott E. Pruitt	Field Supervisor	Purpose and Need; No comments: Proposed Alternatives; Concerns raised for fish and wildlife resources regarding wetlands in the areas of Tanners Creek and Wilson and Hogan Creeks-See Appendix B Regulatory Assessment; This proposal will require the formal approval of our agency for construction in a floodway: Natural Heritage Database; To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity: Fish and Wildlife Comments; Extensive Response- See Appendix B
Indiana Department of Natural Resources	Division of Fish and Wildlife	Jon W. Eggen	Environmental Supervisor	No comments on the general environmental impacts of the proposed project- See Appendix B
US Army Corps of Engineers	Louisville District	Phyllis Hockett	Project Manager	Concurrence with alternatives eliminated for further evaluation; Limited concern regarding alternatives proposed for further evaluation- See Appendix B
Environmental Protection Agency, Region V	NEPA Implementation Section	Kenneth Westlake	Chief	Provided general comments on permitting and mitigation of impacts.
Indiana Department of Environmental Management				

Table 4.04-1 Specific Agency Comments

4.05 POTENTIAL HISTORIC IMPACTS

Five historic districts are present in the project corridor that have potential to be impacted by proposed projects. These include the Lawrenceburg, Newtown, Aurora, North Aurora and Greendale Historic Districts.

A. Segment 1—Dillsboro to Aurora (SR 262 to SR 148)

No improvements, other than access management solutions are proposed for this segment. No historic sites or structures should be affected by implementation of access management strategies.

B. Segment 2—Aurora to Lawrenceburg (SR 148 to SR 48)

This segment encompasses the Aurora and North Aurora Historic Districts. Three proposed improvements are recommended for further evaluation in this segment.

1. *TSM Concept 11—Eliminate Left Turn Lanes Except at Major Intersections and Replace TWLTL with Barrier Median*

The Aurora Historic District lies to the south of US 50 and should not be affected by this project. The southern boundary of the North Aurora Historic District is adjacent to the westbound lane of US 50. Structures listed as outstanding, notable, or contributing in the D.C. Interim Report are located in this area, however it is not anticipated that any structures will be significantly impacted by this management solution.

2. *Intersection Improvement—US 50 at Wilson Creek Road*

No known historic sites, structures, or districts will be impacted by this project.

3. *Intersection Improvement—US 50 at Wal-Mart Entrance*

No known historic sites, districts, or structures will be impacted by this project.

C. Segment 3—Lawrenceburg (SR 48 to Arch Street)

Three proposed alternatives are recommended for additional evaluation in this segment. The Lawrenceburg and Newtown historic districts are present in this segment. It should be noted that the Jennison Guard Site is listed on the National Register. This site is in Lawrenceburg, but the address is restricted, so potential impact to this site is unknown.

1. *Alternative 1—On-Alignment Capacity Expansion (from four to six lanes) in Downtown Lawrenceburg*

This alternative is likely to impact structures in the Newtown Historic District listed in the Interim Report as notable or outstanding. No structures listed on the National Register would be affected by this alternative.

2. Alternative 5—One-Way Pair (Near North)

This alternative will impact the Newtown Historic District. However, the construction of the new Tanners Creek Bridge will have already disturbed some historic structures. No structures currently listed on the National Register are located in the Newtown Historic District. Many community structures and residences listed as outstanding, notable, and contributing are located in this stretch of US 50.

3. Alternative 6—One-Way Pair (Mid North)

Similar to Alternative 5, this alternative will impact the Newtown Historic District. The construction of the new Tanners Creek Bridge will have already disturbed some historic structures prior to construction of this project. No structures currently listed on the National Register are located in the Newtown Historic District. Many community structures and residences listed as outstanding, notable, and contributing are located in this part of US 50.

Discarded alternatives and TSM Concepts from this segment were also reviewed for potential Historic Structure/District Impacts.

4. Alternative 4—One-Way Pair (South)

This discarded alternative would have significant impact to the Lawrenceburg Historic District and some disturbance of the Newtown Historic District located north of US 50.

5. Alternative 7—One-Way Pair (Far North)

This discarded alternative would have significant impacts to historic structures located in the Newtown and Lawrenceburg Historic Districts, as well as structures located on Ridge Avenue.

6. Alternative 8—SR 1 to SR 48 Connector (Nowlin Avenue)

Several structures listed in the Dearborn County Interim Report could be impacted by construction of this alternative.

7. Alternative 9—SR 1 to SR 48 Connector (Indiana Glass)

Depending on final alignment, some historic structures located in the eastern section of the project area could be impacted.

8. Alternative 10—New Ohio River Bridge (US 50 to KY 20)

This discarded alternative would have impact on one historic district in Aurora. Potential impacts to structures in Kentucky were not investigated.

9. TSM Concept 2—No Left Turn Lanes in Downtown Lawrenceburg during Peak Periods

This discarded alternative could potentially impact historic structures because of increased traffic.

10. TSM Concept 3—Reversible Lanes in Downtown Lawrenceburg

This discarded alternative was expected not to impact known historic sites, structures or districts.

D. Segment 4—Greendale (Arch Street to I-275)

Intersection Improvements—US 50 at I-275 Interchange

One structure listed on the National Register is located in this segment. However, this structure lies outside of the I-275 intersection area and should not be affected by modification to the intersection.

4.06 POTENTIAL WETLAND IMPACTS

A brief discussion of potential wetland acreage to be impact by proposed improvements follows:

A. Segment 1—Dillsboro to Aurora (SR 262 to SR 148)

No improvements are proposed for this segment; therefore, no wetlands have potential to be impacted.

B. Segment 2—Aurora to Lawrenceburg (SR 148 to SR 48)

1. *TSM Concept 11—Eliminate Left Turn Lanes Except at Major Intersections and Replace TWLTL with Barrier Median*

This project does not have the potential to impact wetlands.

2. *Intersection Improvement—US 50 at Wilson Creek Road*

This proposed improvement will likely disturb 0.3 acres of wetlands.

3. *Intersection Improvement—US 50 at Wal-Mart Entrance*

This proposed improvement does not have the potential to disturb wetlands.

C. Segment 3—Lawrenceburg (SR 48 to Arch Street)

1. *Alternative 1—On-Alignment Capacity Expansion (from four to six lanes) in Downtown Lawrenceburg*

This proposed alternative has no potential to impact wetland acreage.

2. *Alternative 5—One-Way Pair (Near North)*

This proposed alternative will likely disturb 0.3 acres of wetlands.

3. *Alternative 6—One-Way Pair (Mid North)*

This proposed alternative has no potential to impact wetland acreage.

D. Segment 4—Greendale (Arch Street to I-275)

No wetlands are present in the area of the proposed *Intersection Improvements—US 50 at I-275 Interchange* proposed for this segment.

4.07 REGULATORY DATABASE REVIEW

A review of environmental database records maintained by state and federal agencies was conducted by FirstSearch Technology Corporation which provided coverage for the entire project corridor from Dillsboro to I-275. The search included a one-mile area on each side of the existing alignment of US 50 in order to obtain information on potential sites of environmental concern for proposed project alternatives.

The following tables summarize sites of potential environmental concern for each alternative recommended for further study. Only those sites identified along proposed alignments or within 1/8-mile of each alignment are listed in the tables. The following databases and their abbreviations are used:

NPL:	EPA NATIONAL PRIORITY LIST—Database of confirmed, proposed, or deleted Superfund sites
CERCLIS:	EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM—Database of current and potential Superfund sites currently or previously proposed for investigation
NFRAP:	EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM ARCHIVED SITES—Database of Archived designated CERCLA sites that, to the best of EPA's knowledge, assessment has been completed and has determined no further steps will be taken to list this site on the NPL. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site
RCRA TSD:	EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM TREATMENT STORAGE AND DISPOSAL FACILITIES—Database of facilities licensed to store, treat and dispose of hazardous waste materials
RCRA COR:	EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES—Database of RCRA facilities with reported violations and subject to corrective action
RCRA GEN:	EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES—Database of facilities that generate or transport hazardous waste or meet other RCRA requirements. LGN—Large Quantity Generator; SGN—Small Quantity Generator; VGN—Conditionally Exempt Generator; Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List) facilities
ERNS:	EPA/NRC EMERGENCY RESPONSE NOTIFICATION SYSTEM—Database of emergency response actions. Data since January 2001 has been received from the National Response System database as the EPA no longer maintains this data
STATE SITES:	IDEM HAZARDOUS WASTE INVENTORY SITE LISTING—Database of hazardous waste sites that have made the state's inventory list.

SWL:	IDEM PERMITTED SOLID WASTE FACILITIES LIST—Database of permitted landfills and transfer stations
OTHER:	IDEM COMMUNITY RIGHT TO KNOW (CRTK)—Database of all CRTK facilities in the IDEM database that have submitted Tier II forms for 2001 and 2002. SEED COMMISSIONERS DATABASE OF PESTICIDES—Database of commercial applicators and restricted use dealers of pesticides for the State of Indiana
UST:	IDEM UNDERGROUND STORAGE TANK REPORT—Database of all underground storage tanks registered with IDEM
LUST:	IDEM LEAKING UNDERGROUND STORAGE TANK REPORT—Database of all open, closed, and deactivated leaking underground storage tanks in the IDEM database

A. Segment 1—Dillsboro to Aurora (SR 262 to SR 148)

The “No-Build” alternative is the preferred alternative for this segment; therefore, no potential sites of environmental concern were identified. Access management controls developed by the Gateway Study for short- and long-term transportation improvements should not be impacted by potential hazardous waste sites.

B. Segment 2—Aurora to Lawrenceburg (SR 148 to SR 48)

1. *TSM Concept 11—Eliminate Left Turn Lanes Except at Major Intersections and Replace TWLTL with Barrier Median*

Database	NPL	CERCLIS	NFRAP	RCRA TSD	RCRA GEN	ERNS	State Sites	SWL	Other	UST	LUST
On Alignment	0	0	0	0	1	0	0	0	1	5	4
<1/8-mile	0	0	0	0	2	1	1	0	3	8	9

Table 4.07-1 Potential Sites of Environmental Concern—TSM Concept 11

2. *Intersection Improvement—US 50 at Wilson Creek Road*

Database	NPL	CERCLIS	NFRAP	RCRA TSD	RCRA GEN	ERNS	State Sites	SWL	Other	UST	LUST
On Alignment	0	0	0	0	0	1	0	0	1	0	0
<1/8-mile	0	0	0	0	0	1	0	0	0	0	0

Table 4.07-2 Potential Sites of Environmental Concern—Intersection Improvement-US 50 at Wilson Creek Road

3. *Intersection Improvement—US 50 at Wal-Mart Entrance*

Database	NPL	CERCLIS	NFRAP	RCRA TSD	RCRA GEN	ERNS	State Sites	SWL	Other	UST	LUST
On Alignment	0	0	0	0	0	1	0	0	1	0	0
<1/8-mile	0	0	0	0	0	1	0	0	0	0	0

Table 4.07-3 Potential Sites of Environmental Concern—Intersection Improvement-US 50 at Wal-Mart Entrance

C. Segment 3—Lawrenceburg (SR 48 to Arch Street)

1. *Alternative 1—On-Alignment Capacity Expansion (from four to six lanes) in Downtown Lawrenceburg*

Database	NPL	CERCLIS	NFRAP	RCRA TSD	RCRA GEN	ERNS	State Sites	SWL	Other	UST	LUST
On Alignment	0	0	0	0	1	1	0	0	1	7	4
<1/8-mile	0	0	0	0	2	3	1	0	4	10	9

Table 4.07-4 Potential Sites of Environmental Concern—Alternative 1

2. *Alternative 5—One-Way Pair (Near North)*

Database	NPL	CERCLIS	NFRAP	RCRA TSD	RCRA GEN	ERNS	State Sites	SWL	Other	UST	LUST
On Alignment	0	0	0	0	0	1	0	0	0	2	1
<1/8-mile	0	0	0	0	1	2	1	0	2	3	2

Table 4.07-5 Potential Sites of Environmental Concern—Alternative 5

3. *Alternative 6—One-Way Pair (Mid North)*

Database	NPL	CERCLIS	NFRAP	RCRA TSD	RCRA GEN	ERNS	State Sites	SWL	Other	UST	LUST
On Alignment	0	0	0	0	0	1	0	0	0	2	1
<1/8-mile	0	0	0	0	1	2	1	0	2	3	2

Table 4.07-6 Potential Sites of Environmental Concern—Alternative 6

D. Segment 4—Greendale (Arch Street to I-275)

Intersection Improvements—US 50 at I-275 Interchange

Database	NPL	CERCLIS	NFRAP	RCRA TSD	RCRA GEN	ERNS	State Sites	SWL	Other	UST	LUST
On Alignment	0	0	0	0	0	1	0	0	0	1	0
<1/8-mile	0	0	0	0	0	1	0	0	1	1	1

Table 4.07-7 Potential Sites of Environmental Concern—Intersection Improvements-US 50 at I-275 Interchange

SECTION 5
RECOMMENDATIONS

5.01 RECOMMENDATIONS

Operations and travel demand modeling indicates that improvements to the existing US 50 corridor are essential to reduce congestion, improve safety, and enhance US 50 as a Statewide Mobility Corridor. After analysis of several alternatives, the following recommended alternatives are provided for further evaluation. These are divided into each segment of the corridor as described in the report and are further divided into short- and long-term recommended improvements.

Included with recommendations is the level of environmental documentation that will likely be required to advance each recommended alternative. The level of documentation is determined by the cultural and environmental impacts of a particular alternative. Possible documentation requirements are Level 1, 2, 3, and 4 Categorical Exclusion (CE) documentation, to preparation of an Environmental Assessment (EA) or Environmental Impact Statement (EIS). EA Documentation is required for projects where it is not clear if significant impacts are involved, to determine if a “finding of no significant impact” (FONSI) can be issued. FHWA initiates an EIS when it is not possible to issue a FONSI, where significant impacts are expected. FHWA has reviewed the following recommendations and has determined that the Environmental Assessment should be completed for the Segment 3 Long-term Improvements (Evaluation of Alternatives 1, 5, and 6) and that all of the other projects of independent utility can be advanced as Categorical Exclusions.

A. Segment 1–Dillsboro to Aurora (SR 262 TO SR 148)

Operations modeling using HCS indicate Segment 1 should continue to operate with little or no congestion through both the AM and PM peak hours using 2030 forecasted traffic volumes. To increase safety of the corridor, access management solutions are recommended as both short- and long-term improvements for this segment.

Short- and Long-Term Improvements

Access management solutions for short- and long-term improvements have been developed through the Gateway Study, prepared by ME Companies for OKI and Dearborn County. Recommendations of this study include combining existing access points where possible, encouraging new developments to access existing intersecting roads, connecting existing or constructing new frontage roads, restricting or eliminating left turn movements, adding center medians, installing curbing to eliminate existing access points, adding traffic signals at significant intersections, removing or adding center median breaks, and adding or widening existing sidewalks.

Specific recommendations from the Gateway Study are contained on a series of graphic maps that detail the type and location of specific improvements for each segment. None of the specific improvements from this study rise to the level of a Project of Independent Utility, however. The Gateway Study should be consulted to determine the specific recommendations for this segment. As access density decreases, safety and LOS for this segment will improve.

B. Segment 2–Aurora to Lawrenceburg (SR 148 to SR 48)

The projected 2030 LOS for the section of US 50 from SR 148 to Wilson Creek Road diminishes to LOS D, presuming no improvements are completed. Additionally, the US 50 and Wilson Creek Road, US 50 and Wal-Mart Entrance, and US 50 and SR 48 intersections will all experience individual movements of LOS F and overall intersection operations of LOS F in the PM peak hour by 2030. Since these levels of service are not acceptable and purpose and need are not met, the following recommendations are provided:

1. *Short-Term Improvement*

TSM Concept 11–Eliminate Left-Turn Lanes Except at Major Intersections and Replace TWLTL with Barrier Median

This management solution covers a length of 2.5 miles from SR 350 to SR 48. The proposed improvement would eliminate left-turn lanes except at major intersections. Also suggested is a replacement of TWLTL with a barrier median. This solution provides encouragement of future access management solutions, such as combining existing access points wherever possible, encouraging new developments to access existing intersecting roads, and connecting existing frontage roads.

Since this eliminates nonsignalized left turns in the corridor, engineering judgment suggests this will provide an acceptable LOS and will improve safety within this section. This serves to enhance the SMC and thus satisfies purpose and need. TSM Concept 11 is recommended for further evaluation.

2. *Long-Term Improvements*

a. Intersection Improvement–US 50 at Wilson Creek Road

This improvement includes dual left-turn lanes from Wilson Creek Road and US 50. The length of the project is 1500 feet on US 50 and 700 feet on Wilson Creek Road. This project will provide additional capacity and will improve the 2030 LOS at the intersection to an acceptable level, which satisfies purpose and need for this section. Projected 2030 LOS for overall intersection operations and specific movements within the intersection, following recommended improvement, are provided in Table 5.01-1. It is anticipated that this alternative would require Level 2 CE documentation based on amount of R/W required.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Wilson Creek Road	LOS B		LOS D	NBL SBT EBL, EBR

Note: NBL = Northbound Left SBT = Southbound Through
EBL = Eastbound Left EBR = Eastbound Right

Table 5.01-1 2030 Wilson Creek Road Improved Intersection Operations from Synchro

b. Intersection Improvement–US 50 at Wal-Mart Entrance

The proposed improvement includes dual left-turn lanes from Wal-Mart and US 50 eastbound and exclusive right turns from US 50 westbound. North- and southbound turning movements will also be eliminated, which will simplify signal phasing. This project will provide additional capacity at the intersection and will improve the 2030 LOS at the intersection to an acceptable level. Projected 2030 LOS for overall intersection operations and specific movements within the intersection, following proposed intersection improvements, are provided in Table 5.01-2. It is anticipated that this alternative would require Level 3 CE documentation, at a minimum.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Wal-Mart Entrance	LOS A		LOS C	NBL SBL, SBR EBL WBL, WBT

Note: NBL = Northbound Left SBL = Southbound Left SBR = Southbound Right
EBL = Eastbound Left WBL = Westbound Left WBT = Westbound Through

Table 5.01-2 2030 Wal-Mart Improved Intersection Operations from Synchro

C. Segment 3–Lawrenceburg (SR 48 to Arch Street)

Segment 3 experiences significant congestion at the US 50 and SR 48 intersection during the existing AM peak hour, while other locations function adequately. The existing PM peak hour sees more congestion at all locations and significant friction for turning movements across the highway. The US 50 and SR 48 intersection currently operates at LOS E overall. Forecasted traffic volumes will create severe congestion (LOS F) at the SR 48 and Main Street intersections during the PM peak hour in 2030, while the Front Street intersection will operate at LOS E. Queuing will also become a serious concern causing intersection blockage and impairing corridor safety. The SR 48 intersection is currently being relocated and constructed west of the existing intersection. This project will be completed by June 2007.

As this segment poses the most significant current and future concern for LOS and safety, numerous alternatives were investigated during this study. Three separate long-term improvement alternatives are recommended for further evaluation; each alternative satisfies purpose and need, while minimizing construction impacts versus other alternatives considered. A summary table of construction costs and potential impacts for these three alternatives is provided in Table 5.01-3. The following alternatives are recommended for further evaluation.

1. *Short-Term Improvement*

TSM Concept 2–No Left Turns Allowed in Downtown Lawrenceburg During Peak Periods

This TSM concept creates two-phase signals and increases capacity through Lawrenceburg. Since left turns will be prohibited, vehicles would be required to turn right and circle the block to reach an intended destination.

This solution, although providing short-term improvements, is not expected to be sufficient to improve operations to LOS D or better. This project is recommended for further evaluation as a short-term solution to congestion for downtown Lawrenceburg because of the ability to complete the project in a short timeframe and the low cost and minimal impacts of the alternative. Ultimately, however, long-term solutions must also be considered.

2. *Long-Term Improvements*

Three long-term improvement alternatives are recommended for further evaluation for Segment 3. Each alternative has merit, and final determination of the best alternative should occur after more exhaustive analysis. A brief summary of potential environmental and cultural impacts for each alternative in Segment 3 is provided in Table 5.01-3. According to the most recent plans from ASP, each of these alternatives should be compatible with the proposed new Tanners Creek Bridge project; modifications to bridge approaches and local streets will likely be required for any of the three projects, however.

Alternative	New R/W Area	No. Bldg. Disturbed	Wetland Disturbed (acres)	Historic Structures/ Districts	Cost (\$) Millions
Alternative 1 -On-Alignment Capacity Expansion in Downtown Lawrenceburg	4.0	10 to 15	0.0	10-15 Sites/ 2 Districts	20
Alternative 5 -One-Way Pair (Near North)	1.5	4 - 5	0.3	20-25 Sites/ 2 Districts	24
Alternative 6 -One-Way Pair (Mid North)	6.2	5 to 10	0.0	20-25 Sites/ 2 Districts	25

Table 5.01-3 Summary of Environmental and Cultural Considerations for Preferred Alternatives–Segment 3

- a. Alternative 1–On-Alignment Capacity Expansion (from four to six lanes) in Downtown Lawrenceburg

This solution requires three through lanes plus dual left-turn lanes and exclusive right-turn lanes at major intersections in the City of Lawrenceburg. The proposal addresses congestion through Lawrenceburg and improves the 2030 LOS to an acceptable level. The projected overall intersection levels of service and specific movements of LOS D within each intersection are provided in Table 5.01-4. These figures presume the capacity expansion project is completed.

The safety need for this project is satisfied by improvements to the Arch Street Intersection. Congestion and corridor improvements also satisfy need. As this project satisfies purpose and need for improvement of the corridor, Alternative 1 is recommended for further evaluation. Alternative 1 would be included as part of an Environmental Assessment, along with Alternatives 5 and 6. Each of these alternatives would be subjected to more in depth environmental and cultural examinations in consultation with SHPO, consulting parties, and other agencies in order to make a determination of a preferred alternative.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Main Street	LOS B		LOS A	
US 50 and Front Street	LOS B	NBL SBL	LOS D	NBL, NBT SBL, EBT
US 50 and Walnut Street	LOS A	NBL SBL	LOS A	NBL SBL
US 50 and Arch Street	LOS A	WBL	LOS A	SBL, EBL WBL
US 50 and Argosy Parkway	LOS B	NBL, SBL EBL, WBL	LOS B	NBL, SBL EBL, WBL
<p>Note: NBL = Northbound Left NBT = Northbound Through SBL = Southbound Left EBL = Eastbound Left EBT = Eastbound Through WBL = Westbound Left</p>				
Table 5.01-4 2030 Alternative 1 Intersection Operations from Synchro				

b. Alternative 5–One-Way Pair (Near North)

This alternative proposes a one-way pair to the near north of US 50 through Lawrenceburg that provides three-lane, one-way streets with short turn lanes at intersections. This option covers a total length of 1.1 miles and requires new roadway construction and local street reconfiguration.

The projected overall intersection LOS, ranging from LOS A to LOS C, and specific movements of LOS F within each intersection are provided in Table 5.01-5.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Main Street	LOS B		LOS C	
Main Street and Fourth Street	LOS A		LOS B	
US 50 and Front Street	LOS A		LOS B	
Front Street and Fourth Street	LOS B		LOS B	
US 50 and Walnut Street	LOS A		LOS A	
US 50 and Arch Street	LOS A		LOS A	
US 50 and Argosy Parkway	LOS B	NBL, SBL EBL, WBL	LOS B	NBL, SBL EBL, WBL

Note: NBL = Northbound Left SBL = Southbound Left
EBL = Eastbound Left WBL = Westbound Left

Table 5.01-5 2030 Alternative 5 Intersection Operations from Synchro

The travel demand and operations modeling both prove a strong need for improvements in this Segment, and both show improved operations and decreases in congestion with construction of this alternative. As this alternative provides improvements at generally lower cost than other alternatives for this Segment, and expected impacts are generally lower, Alternative 5 is recommended for additional evaluation. Alternative 5 would be included as part of an Environmental Assessment, along with Alternatives 1 and 6. Each of these alternatives would be subjected to more in depth environmental and cultural examinations in consultation with SHPO, consulting parties, and other agencies in order to make a determination of a preferred alternative.

c. Alternative 6–One-Way Pair (Mid North)

This new roadway alternative proposes a mid north pair of three-lane, one-way streets with short turn lanes at intersections. This 1.2-mile option provides acceptable LOS along US 50 through the City of Lawrenceburg. The projected, post construction overall intersection LOS, which ranges from LOS A to LOS C, and specific movements of LOS D for each intersection are provided in Table 5.01-6.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and Main Street	LOS B		LOS B	
Main Street and Fourth Street	LOS B		LOS C	
Main Street and Ridge Avenue	LOS B	WBT	LOS C	
US 50 and Front Street	LOS A		LOS B	
Front Street and Fourth Street	LOS A		LOS A	
US 50 and Walnut Street	LOS A		LOS A	
US 50 and Arch Street	LOS A		LOS A	
US 50 and Argosy Parkway	LOS B	NBL, SBL EBL, WBL	LOS B	NBL, SBL EBL, WBL

Note: NBL=Northbound Left SBL = Southbound Left EBL = Eastbound Left
WBL = Westbound Left WBT = Westbound Through

Table 5.01-6 2030 Alternative 6 Intersection Operations from Synchro

Operations modeling for this alternative indicates this project will result in acceptable 2030 LOS to downtown Lawrenceburg while improving safety at Arch Street. Additionally, Travel Demand Modeling results for Alternative 5 can be reasonably assumed to apply to Alternative 6, since these options function essentially the same. As this alternative satisfies purpose and need and has lower cost and environmental and cultural impacts, this project is recommended for further evaluation for improvement of the corridor. Alternative 6 would be included as part of an Environmental Assessment, along with Alternatives 1 and 5. Each of these alternatives would be subjected to more in depth environmental and cultural examinations in consultation with SHPO, consulting parties, and other agencies in order to make a determination of a preferred alternative.

D. Segment 4–Greendale (Arch Street to I-275)

Segment 4 currently operates adequately with the exception of the US 50/SR 1/I-275 (Bellevue Road) intersection. This intersection operates at LOS F overall during the PM peak hour. Vehicles making turns at this intersection experience long queues and traffic signal cycle failure. Future traffic levels should be able to function adequately across Segment 4 except for the US 50/SR 1/I-275 intersection, which will experience extreme delays and queuing from congestion.

1. Short-Term Improvements

Access Management

Access control and management solutions are recommended for short-term improvements for safety and congestion in this segment. Access management solutions have been developed by the Gateway Study prepared for OKI and Dearborn County.

2. Long-Term Improvements

a. Access Management

Access management solutions should also be considered in any long-term planning for this section. The Gateway Study provides solutions for such management to improve safety and congestion in this segment. This study should be consulted for specific access management recommendations

b. Intersection Improvements – US 50 at I-275 Interchange

This intersection improvement proposes triple left-turn lanes from I-275 westbound and dual left turn lanes for all other movements. This option increases the 2030 overall LOS for this intersection to LOS C for the AM and PM Peak Hours, as shown in Table 5.01-7.

Since operations assessment of this alternative indicates this will provide an acceptable 2030 LOS, this satisfies purpose and need. This alternative is recommended for advancement and further study. It is anticipated that this alternative would require Level 2 or Level 3 CE documentation, depending on the actual number of relocations required.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Ops	LOS D Movement(s)	Overall Intersection Ops	LOS D Movement(s)
US 50 and SR 1/ Bellevue Ave.	LOS C	NBL, SBL EBL	LOS C	NBL, SBL, SBT EBL, EBT, WBL
Note: NBL = Northbound Left SBL = Southbound Left SBT = Southbound Through EBL = Eastbound Left EBT = Eastbound Through WBL = Westbound Left				
Table 5.01-7 2030 US 50 and I-275 Improved Intersection Operations from Synchro				

5.02 SUMMARY OF PROJECTS OF INDEPENDENT UTILITY

Summary sheets of each project of independent utility follow. For Segment 3, in which this study recommends three alternatives for further study, each alternative is presented on a separate sheet. One of these three alternatives should be selected for programming.

**Project of Independent Utility
TSM Concept 11
Eliminate Left-Turn Lanes
US 50 from SR 350 to SR 48**

Dearborn County, Indiana

Proposed Improvement: Eliminate Left-Turn Lanes except at Major Intersections and Replace TWLTL with Barrier Median

Purpose and Need: Improves Congestion and Increases Safety

Priority: Medium

Programming: Since the majority of intersections within this segment of US 50 currently operate at an acceptable Level of Service (LOS), this project is not one of immediate need. Analysis during needs assessment indicates traffic flow will deteriorate by 2030, however. Because of projected failure of intersections and poor corridor operations, this project is one that should be programmed for completion in the near future. Other specific intersection improvements in this section (US 50 and Wilson Creek Road and US 50 and Wal-Mart Entrance) are proposed as separate Projects of Independent Utility that should be considered for immediate programming.

Project Description: This management solution covers a length of 2.5 miles from SR 350 to SR 48. The proposed improvement would eliminate left-turn lanes except at major intersections. Also

suggested is a replacement of TWLTLs with a barrier median. This solution suggests future access management solutions, such as combining existing access points wherever possible, encouraging new developments to access existing intersecting roads, and connecting existing frontage roads.

Preliminary Cost:

\$5,000,000 (2017 dollars)



**Figure 5.02-1 TSM Concept 11–Eliminate Left Turn Lanes:
SR 350 to SR 38**

**Project of Independent Utility
Intersection Improvement
US 50 and Wilson Creek Road**

Dearborn County, Indiana

Proposed Improvement: Intersection Improvement: US 50 and Wilson Creek Road

Purpose and Need: Improves Congestion and Increases Safety

Priority: High

Programming: The need for improvement of the intersection of US 50 and Wilson Creek Road currently exists. Existing overall PM Peak Hour LOS is D, while eastbound left movement is LOS F. This intersection will experience overall LOS F for the PM Peak Hour by 2030. Since this intersection currently warrants improvement to enhance mobility through the US 50 corridor, the proposed project is one that should be programmed for completion in the very near future.

Project Description: The proposed improvement includes dual left-turn lanes from Wilson Creek Road and US 50. The length of the project is 1500 feet on US 50 and 700 feet on Wilson Creek Road. Impacts for the project include the need for an additional 2.5 acres of R/W, including disturbance of 0.3 acres of wetland, and elimination of approximately 30 parking spaces.

Preliminary Cost:

\$8,400,000
(2017 dollars)



Figure 5.02-2 Intersection Improvement: US 50 and Wilson Creek Road

**Project of Independent Utility
Intersection Improvement
US 50 and Wal-Mart Entrance**

Dearborn County, Indiana

Proposed Improvement: Intersection Improvement: US 50 and Wal-Mart Entrance

Purpose and Need: Improves Congestion and Increases Safety

Priority: High

Programming: The need for improvement of the intersection of US 50 and the Wal-Mart Entrance is substantiated by the projected future LOS F. Since this intersection currently warrants improvement to enhance mobility through the US 50 corridor, the proposed project is one that should be programmed for completion in the very near future.

Project Description: The proposed improvement includes dual left-turn lanes from Wal-Mart and US 50 eastbound and exclusive right turns from US 50 westbound. North- and southbound turning movements will also be eliminated, which will simplify signal phasing. This project will have significant business impacts to one or both sides of US 50 and will require approximately 2.0 acres of new R/W. No wetland impacts are expected for this proposed project.



Preliminary Cost:
\$6,700,000
(2017 dollars)

Figure 5.02-3 Intersection Improvement: US 50 and Wal-Mart Entrance

**Project of Independent Utility
TSM Concept 2
No Left Turns Allowed in Downtown Lawrenceburg During Peak Periods
Dearborn County, Indiana**

Proposed Improvement: Elimination of Left Turns in Downtown Lawrenceburg

Purpose and Need: Improves Congestion, Increases Safety, Enhances Corridor

Priority: High

Programming: The need for improvement of US 50 through downtown Lawrenceburg is well established through analysis of existing and future corridor and intersection operations. Three long-term alternatives are proposed for US 50 through Lawrenceburg to reduce congestion and improve safety. However, because of significant cost and R/W requirements, major improvements to the corridor will take considerable time to complete. This project is one that will improve LOS and safety of the corridor, but it is intended as a short-term solution before one of the three long-term solutions is decided upon and constructed. This solution should be programmed as a high priority project.

Project Description: This Transportation System Management concept creates two-phase signals and increases capacity through Lawrenceburg. Since left turns will be prohibited, vehicles would be required to turn right and circle the block to reach an intended destination. This solution,

although providing short-term improvement, is not expected to be sufficient to improve operations to LOS D or better. Minimal impacts on US 50 are expected, but secondary impacts to other local streets and local businesses may be significant.

Preliminary Cost:
\$400,000
(2008 dollars)



Figure 5.02-4 TSM Concept 2–No Left Turns Allowed in Downtown Lawrenceburg During Peak Periods

**Project of Independent Utility
Alternative 1
On-Alignment Capacity Expansion (from four to six lanes)
In Downtown Lawrenceburg
Dearborn County, Indiana**

Proposed Improvement: US 50 Added travel lanes (from four to six) in downtown Lawrenceburg

Purpose and Need: Improves Congestion, Increases Safety, Enhances Corridor

Priority: High

Programming: The need for improvement of US 50 through downtown Lawrenceburg is well established through analysis of existing and future corridor and intersection operations. This project is one of three alternatives proposed for the segment of US 50 through Lawrenceburg. One of the three alternatives should be chosen and programmed for construction as a high priority project.

Project Description: This solution requires three through lanes plus dual left-turn lanes and exclusive right-turn lanes at major intersections in the City of Lawrenceburg. Alternative 1 will have major business impacts on the north side of US 50 and will require approximately 4.0 acres of new R/W.

This alternative is expected to require ten to 15 relocations and impact a minimum of ten historic structures in two historic districts.

Preliminary Cost:
\$20,000,000
(2017 dollars)



Figure 5.02-5 Alternative 1

**Project of Independent Utility
Alternative 5
One-Way Pair (Near North)
Dearborn County, Indiana**

Proposed Improvement: Added One-Way Pair: US 50 in Downtown Lawrenceburg

Purpose and Need: Improves Congestion, Increases Safety, Enhances Corridor

Priority: High

Programming: The need for improvement of US 50 through downtown Lawrenceburg is well established through analysis of existing and future corridor and intersection operations. This project is one of three alternatives proposed for the segment of US 50 through Lawrenceburg. One of the three alternatives should be chosen and programmed for construction as a high priority project.

Project Description: This alternative proposes a one-way pair to the near north of US 50 through Lawrenceburg that provides three-lane, one-way streets with short turn lanes at intersections. This project covers a total length of 1.1 miles and requires new roadway construction and local street reconfiguration. It is expected to require 1.5 acres of new R/W, including 0.3 acres of wetlands. Alternative 5 will also require four to five relocations and, if constructed today, would impact a minimum of twenty structures listed as notable, outstanding or contributing in the Dearborn County Interim



Figure 5.02-6 Alternative 5

Report. Impacts to historic structures should be less for this project, presuming the proposed additional bridge over Tanners Creek is constructed prior to this project.

Preliminary Cost:
\$24,000,000
(2017 dollars)

**Project of Independent Utility
Alternative 6
One-Way Pair (Mid North)
Dearborn County, Indiana**

Proposed Improvement: Added One-Way Pair: US 50 in Downtown Lawrenceburg

Purpose and Need: Improves Congestion, Increases Safety, Enhances Corridor

Priority: High

Programming: The need for improvement of US 50 through downtown Lawrenceburg is well established through analysis of existing and future corridor and intersection operations. This project is one of three alternatives proposed for the segment of US 50 through Lawrenceburg. One of the three alternatives should be chosen and programmed for construction as a high priority project.

Project Description: This new roadway alternative proposes a mid north pair of three-lane, one-way streets with short turn lanes at intersections. Since new roadway will be constructed for this alternative, extensive R/W (approximately 6.2 acres) will be required, along with five to ten relocations. A

significant number of structures listed as notable or outstanding in the Dearborn County Interim report would be impacted.

**Preliminary
Cost:**
\$25,000,000
(2017 dollars)



Figure 5.02-7 Alternative 6

**Project of Independent Utility
Intersection Improvement
US 50 at I-275 Interchange**

Dearborn County, Indiana

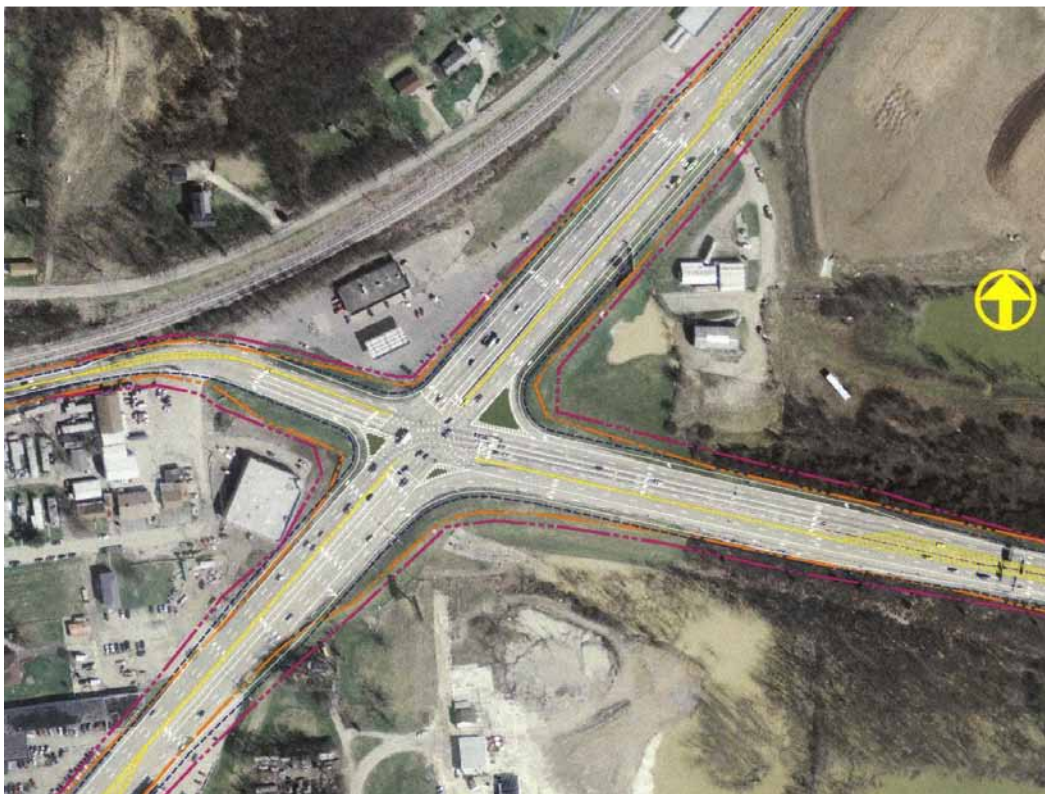
Proposed Improvement: Intersection Improvement: US 50 and I-275 Interchange

Purpose and Need: Improves Congestion, Increases Safety, Enhances Corridor

Priority: High

Programming: The need for immediate improvement of this intersection is demonstrated in the current overall LOS F during the PM peak hour. Vehicles making turns at this intersection experience long queues and traffic signal cycle failure. As this interchange is essential for travel through this corridor, the intersection should be programmed as a high priority project.

Project Description: This intersection improvement proposes triple left turn lanes from I-275 west bound and dual left-turn lanes for all other movements. This proposed improvement will require approximately 4.0 acres of new R/W, with two to three commercial property relocations.

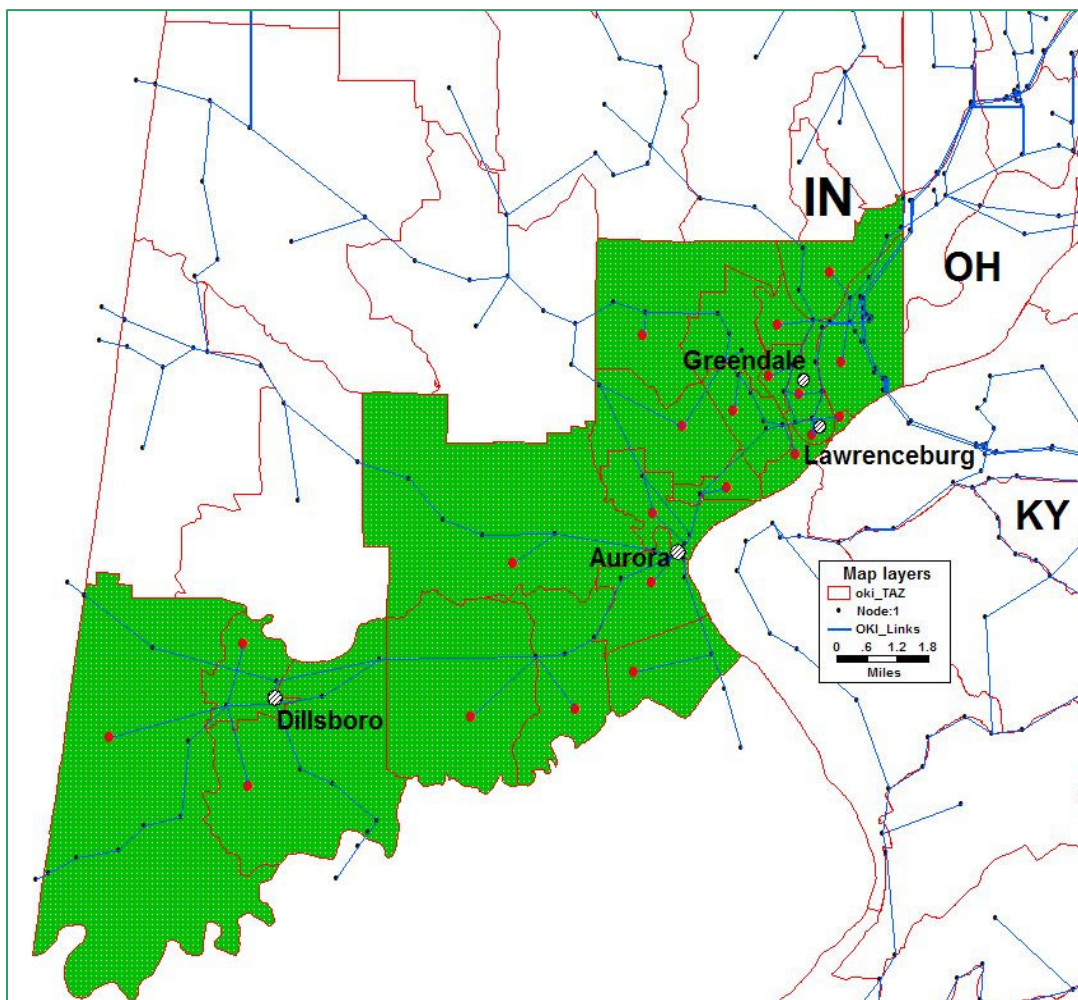


**Preliminary
Cost:**
\$28,000,000
(2017 dollars)

Figure 5.02-8 Intersection Improvement: US 50 at I-275 Interchange

DRAFT

Transportation Demand Modeling of the US 50 Corridor, Dearborn County, Indiana



Wilbur Smith Associates
50 Years

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I. Travel Demand Model

This report documents the efforts of the Strand team in developing a travel demand model to produce traffic volume forecasts for the US 50 corridor in southern Dearborn County, Indiana. These efforts are described in Task F of the scope of services for the US 50 Corridor Study, commissioned by the Indiana Department of Transportation (IDOT).

The purposes of the travel demand model are to forecast future US 50 travel, estimate the effects of future development impacts on Dearborn County's arterial/major collector roadway network, and to evaluate a set of corridor alternatives developed to address congestion within the US 50 corridor.

The first part of the report discusses the set-up and calibration of a sub-model representing the study area. Part II of the report describes the project alternatives modeled, the specific efforts taken to produce those alternative models, and the results of the simulations.

I.1. Indiana vs. OKI Statewide Model

Two Travel Demand Models covering Dearborn County were available to the project team: the Indiana Statewide Model (ISTM), and the Regional Travel Demand Model maintained by the Ohio-Kentucky-Indiana Metropolitan Planning Organization (OKI MPO). A review of both models' zone structure and networks was conducted.

With regard to zones, it was found that, while the ISTM uses more TAZs than the OKI model to represent Dearborn County (66 in the ISTM, versus 38 in the OKI RTDM), most of the additional detail is used in the northern portions of Dearborn County, away from the Study Area. It was found that the study area along the US 50 corridor could be represented with 25 zones from the ISTM, or 22 zones from the OKI model. Moreover, the OKI model has finer zone delineation in downtown Lawrenceburg, an area of particular interest for this study.

With regard to highways, it was determined that both models included all important roadway segments in their networks. We concluded that either model could be used for the project analyses.

The OKI model was selected predominantly because it was an MPO model, and because some project team members had previous experience working with it on a project in the OKI area. Output from both the OKI model and the ISTM were compared and found to offer very comparable results.

First, the base-year, unadjusted output from each model was compared to available traffic counts. Each model is more accurate than the other at a roughly equivalent number of locations, and the range of error is similar. These results can be seen in Appendix V.

Secondly, each model's prediction of the number of through trips was calculated. A through trip was defined as a trip using the entire length of US 50 from Station Hollow Rd. in Dillsboro to SR 1 and the I-275 ramps in Greendale. The OKI model predicts about 6,200 through trips in the base year, while the ISTM predicts 6,750.

As a result of these comparisons, we conclude that results obtained for this study using the OKI RTDM are very comparable to the results that would have been obtained using the ISTM.

I.2. Model Preparation

The OKI Regional Travel Demand Model (RTDM) Version 6.3 was used as a starting point to prepare traffic projections. The traffic projections information was used to test the impact that some project alternatives could have along the study corridor.

The OKI RTDM runs in the TranPlan modeling system, and is based upon the conventional four-step modeling approach. In this system the urbanized area is first divided up into a set of spatially contiguous traffic-generating and attracting zones called Traffic Analysis Zones or TAZs. The zones are linked to the highway and transit networks which are defined by thousands of link and node records representing the most significant highways and roads in the urban area as well as the transit lines in the region. The four-step approach consists of the following:

1. Trip Generation: How many trips does each zone generate?
2. Trip Distribution: What destinations will be selected for each of these trips?
3. Mode Choice: How will these trips be divided between driving alone, ridesharing and public transit?
4. Assignment: How many vehicles or people will want to use specific roadways or transit routes?

Originally, the project team had anticipated the possible need to refine the OKI RTDM in order to achieve results with a sufficient level of accuracy. Refinement was to include the subdivision of established RTDM transportation analysis zones (TAZs) into smaller sub-zones, and re-population of the sub-zones with new population & employment data. However, upon inspection it was found that the OKI RTDM is coded at a level of detail appropriate to the study's purposes. The RTDM contains 39 TAZs in Dearborn Co, IN, and 22 of these are on or near US 50 and were included in the study area sub-model. All state-maintained roadways along the corridor are included in the RTDM – including SR 62, SR 56, SR 350, SR 148, SR 48, and SR 1 – as well as Ridge Avenue, which connects SR 1 in Greendale to US 50 in Lawrenceburg. Therefore, no refinement of the existing zone structure or network was found to be necessary.

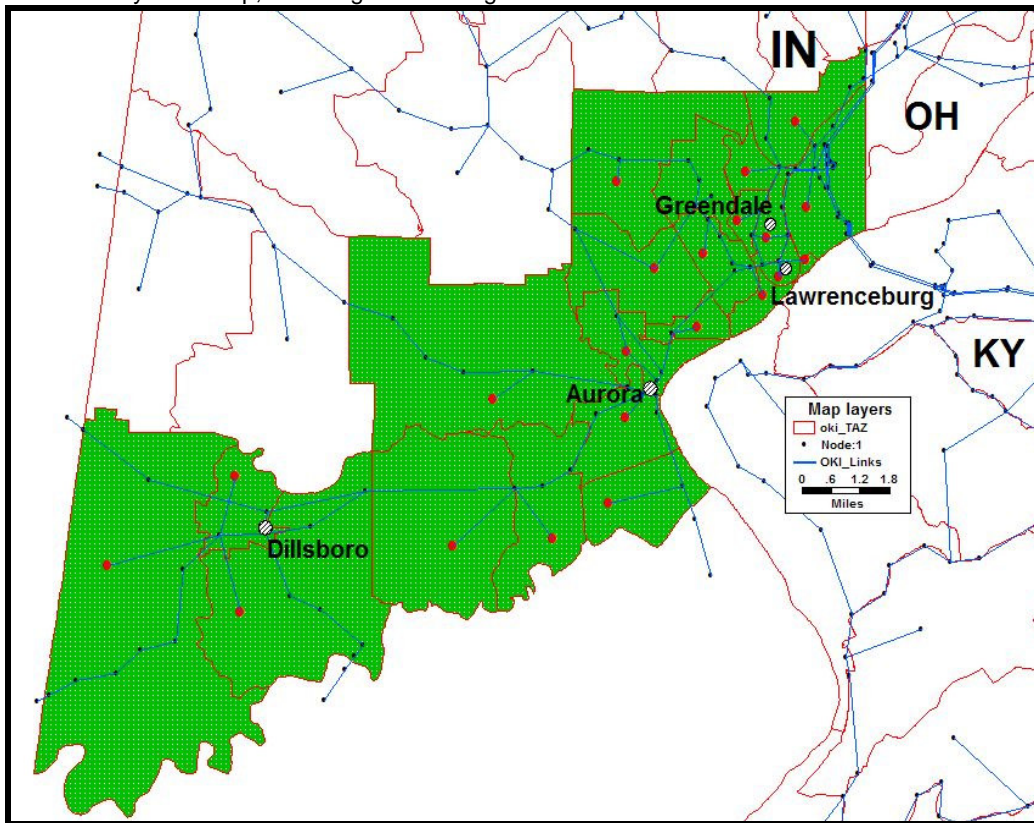
I.2.1. Sub-area model creation

The OKI RTDM is a very sophisticated and complex model, requiring several hours to perform one simulation on an average personal computer. In order to achieve the project

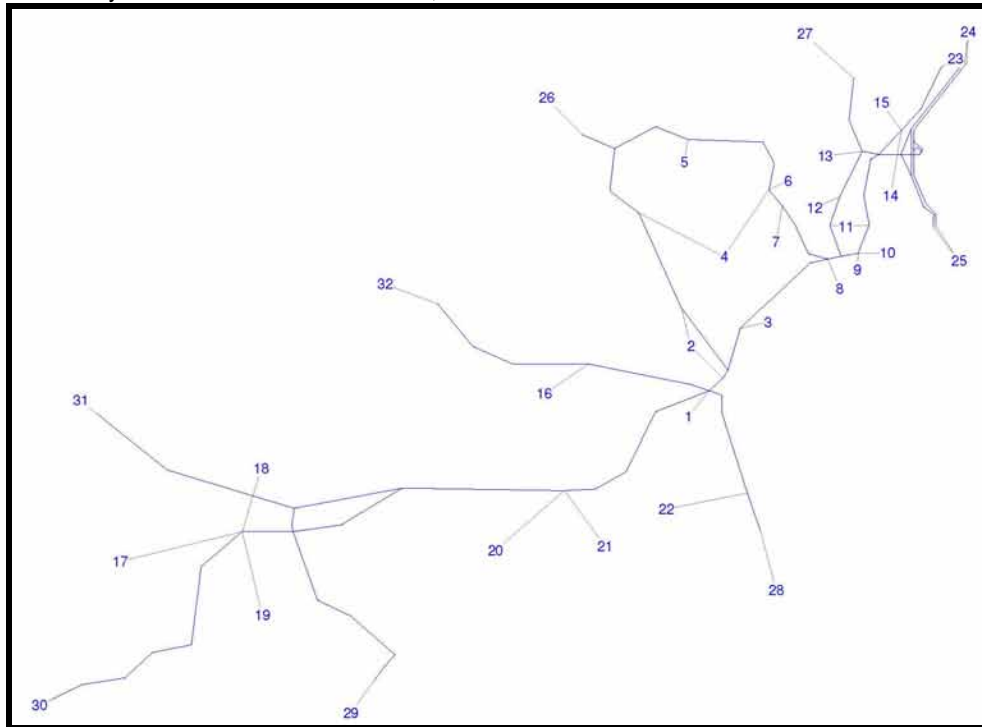
goals as efficiently as possible, a sub-model was created from the full OKI RTDM, representing only the study area. The following paragraphs describe the process of creating this sub-model.

The geography selected for the sub-model includes 22 of the original RTDM TAZs, comprising the southern third of Dearborn County (see **Figure 1a**). This represents over half of the Dearborn Co., IN, TAZs from the original RTDM. The sub-model network includes all roadways completely enclosed by the sub-model geography, and extension beyond the sub-area boundary sufficient to make a robust network and conveniently establish external stations for the sub-model (see **Figure 1b**).

Figure 1a – Study Area Map, including surrounding network & TAZs



In order to establish the sub-model trip distribution, the full OKI RTDM needed to be run one time for each analysis year. With some assistance from OKI staff, the RTDM was installed and successfully run to generate output for the base year (2000) as well as the year 2030. **Table 1** shows the model options used to perform the base and future-year runs of the OKI RTDM.

Figure 1b – Study Area Network from TranPlan, with Centroid Nodes labeled**Table 1:** RTDM setup for Base & Future Years

<u>Model Input</u>	<u>Year 2000</u>	<u>Year 2030</u>
Hwy & Transit Network	2000 Base Year Network	E + C Network
Analysis Year	2000	2030
Validation Run	No (unchecked)	No (unchecked)
Delete Intermediate Files	No (unchecked)	No (unchecked)

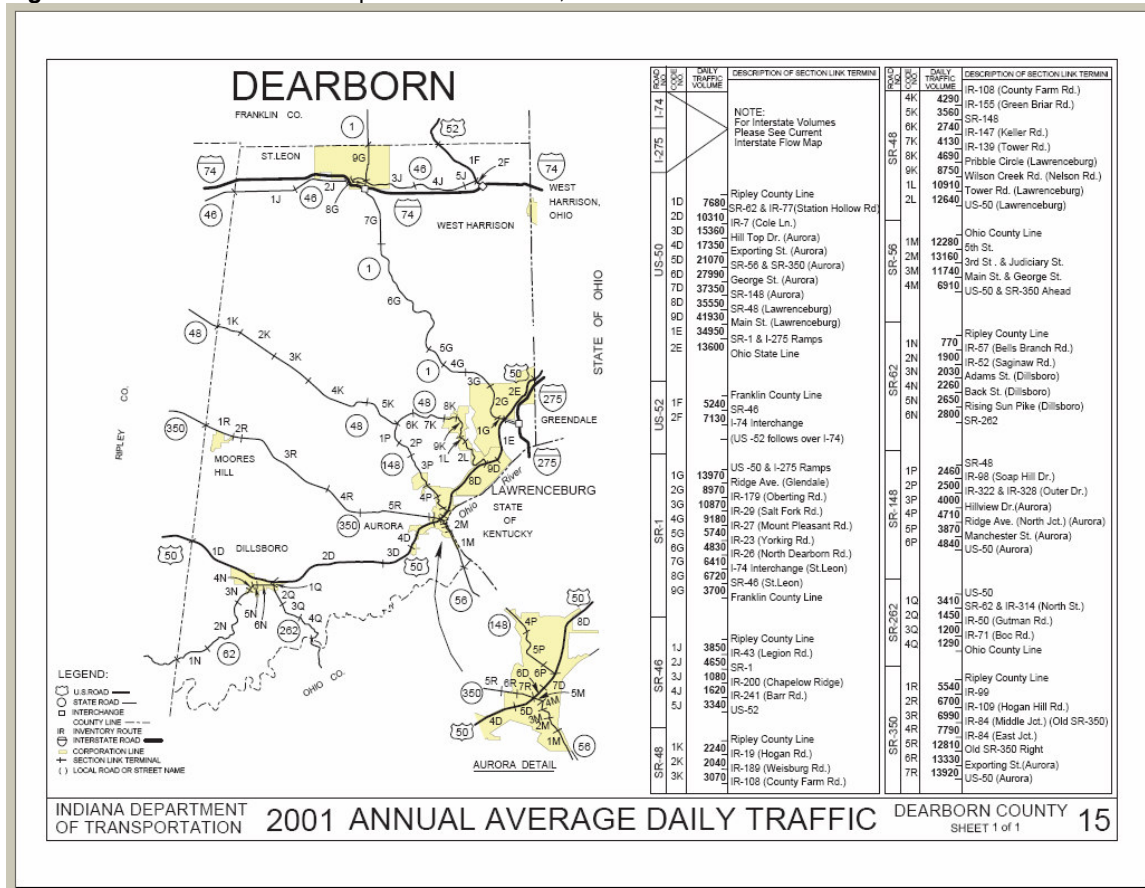
The TranPlan modeling system includes a number of utilities that facilitate the creation of a sub-model from a larger model. A selected-link history file was created to represent the study area by performing an Equilibrium Highway Load on the final vehicle trip table from the RTDM. That file was then used to run the “Extract Subarea Trip Table” utility. Finally, the “Extract Subarea Network” utility was used to generate the sub-network described above. The TranPlan input code used for these functions is presented in Appendix I.

I.2.2. Daily Trip Table Calibration Using ODME

The Dearborn Co / US 50 sub-model was calibrated to match traffic count data for the year 2001 using the Origin-Destination Matrix Estimation (ODME) methodology. Using this method, trips from every zone to every other zone are adjusted until the assigned traffic volumes closely match available traffic counts. A “seed” trip table is specified as a starting point for the calculations.

A total of 23 traffic count locations were used to ground the ODME calibration. Most of these data were taken from the INDOT 2001 AADT map for Dearborn County, which is reproduced in **Figure 2**. The county map, shown in **Figure 2**, does not include volumes from the Interstate Highway System, so data for I-275, both north and south of the US 50 interchange, were taken from the Indiana Interstate Flow Map for 2002. No effort was made to adjust the 2002 volumes to represent 2001, as the difference was assumed to be within the range of model error. These data sources show only total volumes, and not directional volumes, so the data values were split to create 46 individual, one-way count links for the ODME program.

Figure 2 – Year 2001 Counts Map for Dearborn Co., IN



To perform the ODME analysis, the TranPlan utility WSTTCAL was applied to the daily all-vehicle trip table output from the sub-model (subday.trp). The set-up and report files from this analysis are shown in Appendix II, which also contains analysis of the ODME output results. The results vis-à-vis link volumes are shown in **Table 2**, below.

1.2.3. Establish Future Year Trip Table Using FRATAR

Trip table for the future year (2030) was produced using the FRATAR procedures, using the base-year trip tables calibrated via ODME as a starting point. The FRATAR process involves establishing factors by which to adjust production and attraction totals, then

adjusting individual cell values in the trip table (the trip distribution) to achieve a balanced matrix.

Table 2: Traffic Counts and Model Calibration Results

Street	North / West End	South / East End	AADT (1-way)	Southbound / Eastbound			Northbound / Westbound		
				Model	Factor	Diff	Model	Factor	Diff
US 50	Dearborn-Ripley Line	SR 62 & Station Hollow Rd	3,840	3,602	1.07	-238	3,596	1.07	-244
	SR 62 & Station Hollow Rd	Cole Ln (IR-7)	5,155	5,235	0.98	80	5,225	0.99	70
	Cole Ln (IR-7)	Hill Top Dr. (Aurora)	7,680	7,209	1.07	-471	7,209	1.07	-471
	SR 56 & SR 350 (Aurora)	George St (Aurora)	13,995	16,221	0.86	2226	16,192	0.86	2197
	George St (Aurora)	SR 148 (Aurora)	18,675	17,598	1.06	-1077	17,597	1.06	-1078
	SR 148 (Aurora)	SR 48 (Lburg)	17,775	16,926	1.05	-849	16,928	1.05	-847
	SR 48 (Lburg)	Main St (Lburg)	20,965	20,968	1.00	3	20,963	1.00	-2
	Main St (Lburg)	SR 1 & I-275 Ramps	17,475	18,600	0.94	1125	18,490	0.95	1015
SR 62	US 50	North St	1,705	2,042	0.83	337	2,046	0.83	341
SR 350	Exporting St	US 50	6,960	6,466	1.08	-494	6,465	1.08	-495
SR 56	US 50	Main & George Sts	3,455	4,722	0.73	1267	4,738	0.73	1283
SR 148	Manchester St	US 50	2,420	1,988	1.22	-432	1,978	1.22	-442
SR 48	Tower Rd	US 50	6,320	6,061	1.04	-259	6,060	1.04	-260
SR 1	Ridge Ave	US 50	6,985	7,101	0.98	116	7,054	0.99	69
I-275	US 50 Interchange	Ohio	16,005	15,637	1.02	-368	15,534	1.03	-471
I-275	Kentucky	US 50 Interchange	17,515	17,406	1.01	-109	17,508	1.00	-7
SR 48	County Farm Rd	Green Briar Rd	2,145	2,637	0.81	492	2,662	0.81	517
SR 1	Salt Fork Rd	Oberting Rd	5,435	5,408	1.00	-27	5,410	1.00	-25
SR 56	5th St, Aurora	Ohio County Line	6,140	4,801	1.28	-1339	4,810	1.28	-1330
SR 262	Boc Rd	Ohio County Line	645	623	1.04	-22	627	1.03	-18
SR 62	Dearborn-Ripley Line	Bells Branch Rd.	385	374	1.03	-11	377	1.02	-8
SR 350	Middle Jct. Rd	East Jct. Rd	3,895	4,181	0.93	286	4,179	0.93	284
US 50	SR 1 & I-275	Ohio State Line	6,800	6,646	1.02	-154	6,661	1.02	-139

FRATAR adjustment factors were established using the unadjusted base year and future year results from the OKI RTDM. The ratio of future (2030) to base year (2000) Productions and Attractions were calculated, then applied to the corresponding values in the ODME-calibrated base year trip table via TranPlan's 'Fratar Model' function. Factor calculations and the TranPlan script can be found in Appendix III.

I.2.4. Simulation of AM and PM Peak Periods

Since congestion is a significant concern along the study corridor, the study is concerned with peak-period volumes as well as daily volumes. Estimated peak-period trip tables were established for the base and future years for the AM and PM peak periods. Note that the periods used here are those used by OKI and the OKI model:

- AM Peak: 6:00 AM to 8:30 AM (2.5 hours)
- PM Peak: 3:00 PM to 6:30 PM (3.5 hours)

The methodology used to establish peak-period trip tables is summarized below:

1. Divide daily ODME matrix by original OKI daily matrix to establish a matrix of ODME factors
2. Combine separate matrices in each trip table for each time period, then multiply each time period matrix by the ODME factors from (1) to achieve a matrix for each period that is consistent with the daily ODME-calibrated matrix. This gives the final base year trip tables for the peak periods.
3. Establish FRATAR factors for each time period by dividing the original OKI 2030 values by OKI 2000 values for the corresponding time period.
4. FRATAR the base-year peak period matrices from (2) using the factors established in (3). This yields the final future year trip tables for the peak periods.

Further detail, including factor calculations and TranPlan scripts, can be found in Appendix IV.

II. Alternatives Modeled

Two alternative future scenarios were modeled using the OKI subarea model. These include Alternative 5 and Alternative 8. The first, Alternative 5, demonstrates the effects of improved capacity through downtown Lawrenceburg. The second alternative, number 8, features a bypass of US 50 to the north of Lawrenceburg.

II.1. Alternative 5: One-way Pair, Near North

II.1.1. Scenario Set-up:

This concept involves creating a one-way couplet through downtown Lawrenceburg, with the two one-way streets fairly close together. More generally, it represents efforts to increase capacity through downtown Lawrenceburg. To program this alternative into the TranPlan model, a copy of the network Subnet.all was created, and saved as Subnet_5.sce. The following changes were made to generate the network representing Alternative 5:

- Links representing US 50 were re-coded to be one-way westbound, beginning at the intersection with Speedway Drive and extending 1½ miles to a point 1/3 of a mile east of SR 148 – about the location of the intersection with Old US 50.
- One-way links running eastbound were added parallel to these links and joined at the terminal points.
- Three centroid connectors were disconnected from the existing US 50 links and joined to the new eastbound links.
- At four locations—the three centroid connectors and the Ridge Avenue intersection—short connectors were added to connect the eastbound and westbound links of US 50.

Detailed network change information can be found in Appendix VI. A sketch of the modified network is shown in **Figure 3**, below.

A number of capacity assumptions were made for the Alternative 5 alignment, and these are analyzed using scenarios 5a, 5b, and 5c:

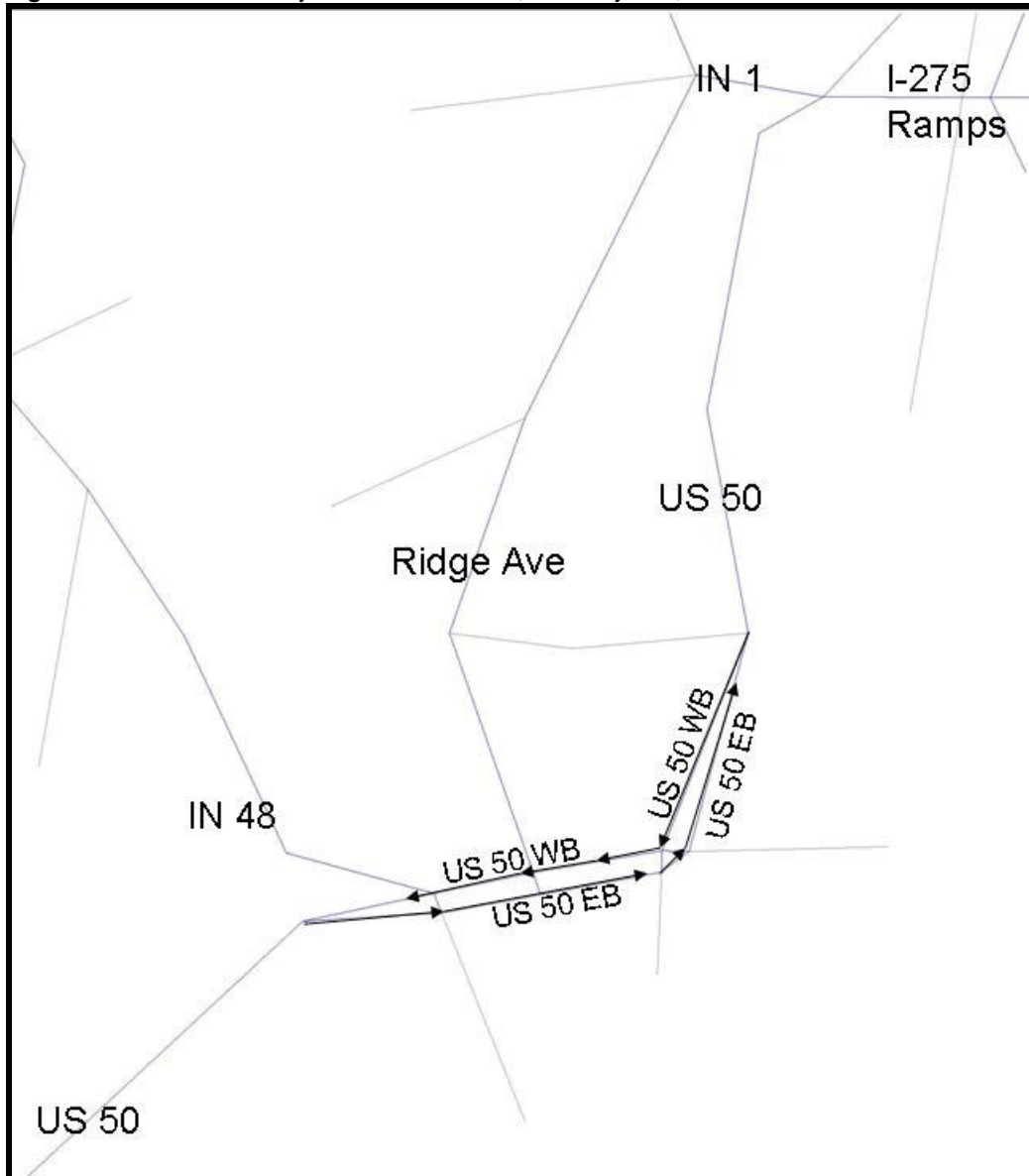
Scenario 5a is a conservative analysis, which assumes that despite the addition of a lane in each direction, operational considerations allow only a modest improvement in capacity, from 2320 to 2700 vph per direction, only on the one-way links.

Scenario 5b assumes a design more successful in improving capacity, with final capacities of 3500 vph per direction. As with Scenario 5a, only the newly-coded one-way links are affected.

Scenario 5c represents a very aggressive campaign to improve capacity through downtown Lawrenceburg, as well as Greendale. Capacities on the one-way couplet links are improved to 5000 vph per direction. In addition, the segments of

US 50 between the one-way couplet and the I-275 ramps (e.g. the sections through Greendale) are improved from a capacity of 2320 to 3500 vph per direction. Finally, capacity on the easternmost segment of SR 1, between Ridge Avenue and US 50 – a consistent bottleneck in scenarios where it is unaltered – is improved from 1350 to 2700 vph/dir.

Figure 3 – Network for analysis of Alternative #5, One-way Pair, Near North.



II.1.2. Results:

It should be stressed that, in the basic sub-network used for this project, the Tanners Creek Bridge is a singular connection between two sets of the sub-model's TAZs. All

trips wishing to pass from one side of the sub-area to the other must use this link; there is no alternate route. Additionally, the analysis methodology involves assigning pre-determined trip tables to alternate networks, and excludes trip generation and distribution. As a result, any scenario which adds capacity but no new alignment, such as Alternative 5, will not show any changes in volume on the Tanners Creek Bridge, and volume changes on other parts of the US 50 corridor represent a shift to or from other routes. The Tanners Creek Bridge link volumes will be the same in the scenario output as in the base, and the sum of cordon volumes on US 50 and parallel links will also remain constant.

The alternative 5 scenarios are nonetheless useful to show the effect that improvements in capacity have on travel time and congested speeds. **Table 3** below, shows improvements in travel time and speed on US 50, between the intersection with Old US 50 to the west, and the SR-1 / I-275 interchange to the northeast.

II.1.2.1 Scenario 5a, Modest Capacity Increase:

If the Scenario 5a improvements had been in place in the year 2000, they would have had only a minor impact, improving travel time and speed by only 5% westbound (WB) and 1% eastbound (EB). However, by the year 2030, the model predicts that without any improvements, average congested speeds will fall by more than half, and travel times more than double. With the Scenario 5a improvements in place in 2030, travel times are 24% lower and average speed 33% higher than without them, though congestion is still markedly higher than in the 2000 scenario.

During the AM and PM peak periods, the benefits of the Scenario 5a improvements are more pronounced in the peak directions. During the AM peak, the improvements deliver a 38% improvement in travel time and 62% improvement in average speed in the eastbound lanes of the Lawrenceburg / Greendale segment of US 50. During the PM peak, the travel time and speed improvements in the westbound direction are 29% and 43%, respectively.

II.1.2.2 Scenario 5b, Intermediate Capacity Increase:

With the Scenario 5b improvements in place, travel time and speed in the year 2000 would have been about 6% better westbound and 4% better eastbound. With the Scenario 5b improvements in place in 2030, travel times are 35% lower and average speed 53% higher than without them. Congestion is considerably higher than in the 2000 scenario. During the peak periods, the benefits are again more pronounced in the peak directions, with 47% and 89% improvements in travel time and average speed, respectively, in the eastbound direction in the morning, and 41% and 72% improvements westbound in the afternoon.

Table 3: Travel time savings resulting from Alternative 5 improvements for Scenarios a, b, and c, along US 50 between the intersections with Old US 50 and I-275.

Eastbound / Northbound					Westbound / Southbound				
Year 2000					Year 2000, Daily				
	Do-Nothing	5a	5b	5c		Do-Nothing	5a	5b	5c
Travel Time-min	4.71	4.65	4.52	4.3		4.7	4.53	4.45	4.25
Impr over DN	n/a	-0.06	-0.2	-0.41		n/a	-0.17	-0.3	-0.45
Pct Impr	n/a	-1%	-4%	-9%		n/a	-4%	-5%	-10%
Avg. Speed-mph	36.82	37.29	38.36	40.33		36.89	38.81	39.51	41.36
Impr over DN	n/a	0.48	1.5	3.51		n/a	1.91	2.6	4.47
Pct Impr	n/a	1%	4%	10%		n/a	5%	7%	12%
Year 2030					Year 2030, Daily				
	Do-Nothing	5a	5b	5c		Do-Nothing	5a	5b	5c
Travel Time-min	11.54	8.74	7.52	4.5		9.87	7.48	7.05	4.57
Impr over DN	n/a	-2.80	-4.0	-7.04		n/a	-2.39	-2.8	-5.30
Pct Impr	n/a	-24%	-35%	-61%		n/a	-24%	-29%	-54%
Avg. Speed-mph	15.03	19.84	23.06	38.53		17.57	23.50	24.94	38.47
Impr over DN	n/a	4.81	8.0	23.51		n/a	5.93	7.4	20.90
Pct Impr	n/a	32%	53%	156%		n/a	34%	42%	119%
Year 2030					Year 2030, AM Peak Pd				
	Do-Nothing	5a	5b	5c		Do-Nothing	5a	5b	5c
Travel Time-min	15.61	9.66	8.28	4.54		10.42	8.85	7.33	4.58
Impr over DN	n/a	-5.95	-7.3	-11.07		n/a	-1.57	-3.1	-5.84
Pct Impr	n/a	-38%	-47%	-71%		n/a	-15%	-30%	-56%
Avg. Speed-mph	11.11	17.95	20.94	38.19		16.64	19.86	23.98	38.38
Impr over DN	n/a	6.84	9.8	27.09		n/a	3.22	7.3	21.74
Pct Impr	n/a	62%	89%	244%		n/a	19%	44%	131%
Year 2030					Year 2030, PM Peak Pd				
	Do-Nothing	5a	5b	5c		Do-Nothing	5a	5b	5c
Travel Time-min	9.31	7.66	7.04	4.46		9.74	6.89	5.74	4.46
Impr over DN	n/a	-1.65	-2.3	-4.85		n/a	-2.85	-4.0	-5.28
Pct Impr	n/a	-18%	-24%	-52%		n/a	-29%	-41%	-54%
Avg. Speed-mph	18.63	22.64	24.63	38.88		17.80	25.52	30.63	39.42
Impr over DN	n/a	4.01	6.0	20.25		n/a	7.71	12.8	21.61
Pct Impr	n/a	22%	32%	109%		n/a	43%	72%	121%

II.1.2.3 Scenario 5c, Aggressive Capacity Increases:

The Scenario 5c improvements lead to improvements in travel time and speed that are significantly higher than the other scenarios. Even in the year 2000, time and speed would have been improved by about 10% in both directions. In 2030, travel times in Scenario 5c are 55 to 60% lower and average speeds 120 to 155% higher than in the corresponding Do-Nothing scenario. Congestion in 2030 is only slightly worse than in the 2000 scenario, and is in fact better than current conditions. During the peak periods,

capacity is high enough to accommodate the peak direction traffic without significant impact on highway performance.

II.1.2.4 Ridge Avenue

Travelers seeking an alternate route to US 50 through Greendale and/or Lawrenceburg may use Ridge Avenue, which intersects US 50 just to the east of the Tanners Creek Bridge, and joins State Route 1 about a third of a mile west of US 50 and the I-275 entrance ramps. Those bound to or from I-275 would use the one-third mile segment of SR 1 as part of the bypass as well; those bound westward on SR 1 would relieve traffic from the easternmost segment of SR 1 by using this alternate route. Depending on the policy goals for Ridge Ave, it may be worthwhile to consider the effects of the scenarios on volume carried by Ridge Avenue.

Improving capacity on US 50 through Lawrenceburg has the effect of reducing traffic on Ridge Avenue, and diverting it back to US 50. In scenario 5a, the effect is negligible, with less than a percent of traffic removed from Ridge Ave. in some time periods. In Scenario 5b, year 2030 traffic on Ridge Ave falls between 3 and 5% from the do-nothing levels, while in Scenario 5c, about 20% of do-nothing traffic is diverted back to US 50.

These findings should be kept in mind when reviewing **Table 3** (above). The travel times and speeds reflect not just an increase in capacity, but also a countervailing increase in volume due to diversion of Ridge Avenue traffic.

II.2. Alternative 8: SR 1 to SR 48 Connector (Nowlin Ave.)

II.2.1. Scenario Set-up:

This concept involves creating a new roadway between SR 48 and SR 1 to the north of Lawrenceburg. To program this alternative into the TranPlan model, a copy of the network Subnet.all was created, and saved as Subnet_8.sce. To produce the Alternative 8 network, two links were added:

- The principal new link in this scenario connects SR 1 to SR 48. It begins about 2.75 miles north of US 50 along SR 48, and terminates 0.63 miles northwest of Ridge Ave along SR 1. Its length is 1.64 miles.
- The second new link connects SR 48 to SR 50, approximately one third of a mile to the west of the current interchange. This link is 0.17 miles long and serves to cut off the circuitous route SR 48 follows northward from its origin with US 50.)

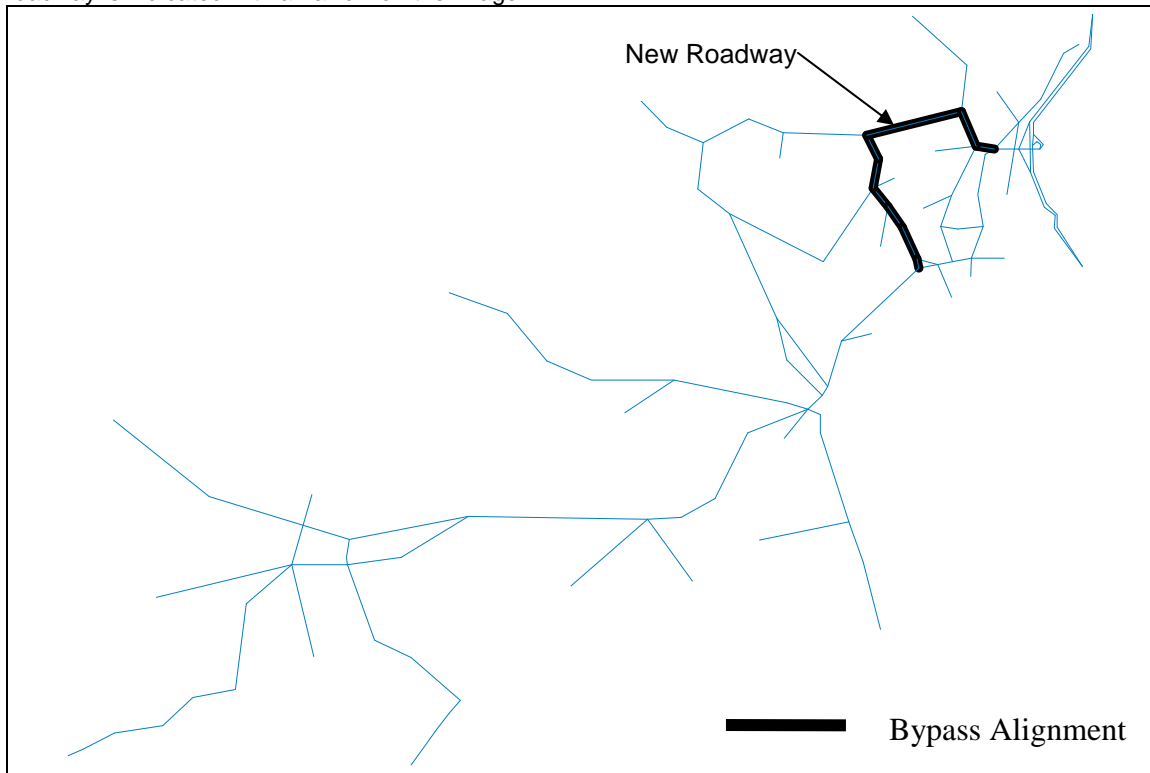
Two scenarios were established, representing versions of Alternative 8 with different capacity and speed assumptions for the Bypass Alignment.

In Scenario 8a, the new links were both coded with assumed free-flow speeds of 42 mph and capacities of 1350 vph per direction. This scenario demonstrates the effects of keeping SR 48 and SR 1 designed as they currently are, and adding a link between them with similar capacity.

Scenario 8b features higher assumed speeds and capacities on the entire bypass alignment, from the intersection of SR 48 and US 50 to the intersection of SR 1 with US 50. Free-flow speeds of 60 mph and capacities of 2700 vph per direction are assumed. This is occasionally referred to as the “Faster Bypass” scenario, while the other is referred to as the “Slower Bypass.” Scenario 8b demonstrates the effects of improving the capacity and design speeds of SR 48 and SR 1, and adding a high-capacity connector between them.

Detailed network change information for both bypass scenarios can be found in Appendix VI. A sketch of the modified network is shown in **Figure 4**, below.

Figure 4 – Network for analysis of Alternative #8, SR 1 to SR 48 Connector (Nowlin Ave.). This image represents both fast and slow scenarios; the scenarios differ in their link attributes. The new bypass roadway is indicated with an arrow on the image.



II.2.2. Scenario Results:

The Alternative 8 scenarios (slow and fast) represent a situation where the Tanner's Creek Bridge is no longer a singular connection between two areas of the sub-model. Therefore, diversion from US 50 in Lawrenceburg is possible. Nonetheless, the sum of volumes on the Tanners Creek Bridge and new Bypass links will equal the total volume on the Tanners Creek Bridge link in a corresponding 'Do-Nothing' scenario.

II.2.2.1 Volumes

Both the fast and slow Bypass scenarios succeed at removing a margin of traffic from US 50 in downtown Lawrenceburg. **Table 4** shows daily volumes at various key points in the study area, as predicted by do-nothing, fast bypass, and slow bypass scenarios in 2000 and 2030. The table demonstrates a number of observations:

- On the critical Tanners Creek Bride link, the slower bypass is predicted to remove about 4,400 daily trips, or about 10.5%, from the anticipated 2030 volume. The faster bypass is predicted to remove another ~2,200 daily trips, for a reduction of 14%.
- Farther east on the opposite side of Lawrenceburg, the faster bypass removes over 15% of ‘Do-nothing’ traffic, while the slower alternative removes only about 3.5%. This large difference is compensated partially by higher volumes on Ridge Ave in the fast bypass scenario, which reflect differing equilibrium assignments in the two scenarios. To some extent, though, this difference indicates that the faster, higher-capacity roadway induces trips originating in Lawrenceburg to go the longer way around to reach some destinations along SR 48 and SR 148, while in the slower bypass scenario, these trips still use the Tanners Creek Bridge.
- On US 50 just west of SR 148, traffic is slightly *higher* with the bypass than without it. This is because traffic coming through Aurora and bound for locations along SR 48, which had traveled up SR 148, now takes US 50 to SR 48. This is due not to the main bypass link, but to the new, westward connection between US 50 and SR 48.

Table 4: Traffic volumes at key locations in the US 50 corridor, for Alternative 8 scenarios a and b, as compared to traffic counts and corresponding Do-Nothing volumes.

		Traffic Count (2001)	Do Nothing 2000	Do Nothing 2030	60 mph Bypass (8b) 2000	60 mph Bypass (8b) 2030	42 mph Bypass (8a) 2030
	Location						
US 50	West of IN 48	35,550	33,891	49,973	34,569	50,575	50,040
US 50	Tanners Creek Bridge	41,930	41,916	60,856	36,595	52,182	54,414
US 50	Bet. Argosy Pkwy & I-275 Ramps	34,950	34,373	47,806	30,733	40,509	46,180
US 50	East of IN 1	13,600	14,848	25,778	14,848	25,778	25,778
I-275	Entrance/Exit Ramps	Unknown	47,450	76,869	47,450	76,869	76,869
By-pass	N of IN US 50 @ IN 1	13,970	20,121	32,427	24,273	39,662	34,112
By-pass	New Segment	N/A	-	-	5,321	8,674	6,442
By-pass	N of US 50 @ IN 48	12,640	12,203	15,913	7,560	8,547	9,538
Ridge Ave	S of SR 1 (N end)	Unknown	12,255	22,137	10,714	21,006	17,451
Ridge Ave	N of US 50 (S. end)	Unknown	11,877	20,057	10,213	18,511	15,552

- Despite the substantial use of the bypass, traffic on SR 48 near its junction with US 50 (but before the split between old and new intersecting links) actually falls with the bypass in place. This speaks to the traffic demand pattern. The bypass link serves almost exclusively to carry traffic generated by / attracted to areas north of US 50, along Srs 48 and 148 (TAZs 4-7, and 26), and points outside the study area to the northwest on SR 48. The total traffic exchanged between these locations and the vicinity of the I-275 ramps now uses the bypass, and no longer has to endure the congestion on US 50 through Lawrenceburg.
- These results are also observed when the AM and PM peak periods are analyzed, and as one would expect, they tend to be more pronounced in the peak directions. For detail on the peak period volumes, see Appendix VII.

II.2.2.2 Through Trips

As mentioned in the last point above, the new bypass alignment serves mostly local traffic originating in areas north of US 50, along Srs 48 and 148. In fact, a select link analysis indicates that the slower bypass link carries no through traffic at all. The faster alignment is projected to carry some through trips, particularly during peak periods. In the AM peak, about 230 of the projected 1,175 trips eastbound on the fast bypass are through trips. This is almost 20%. In the non-peak direction the percentage of through trips is about 50 trips, for 5% of bypass use in that direction. In the PM period, the projected through trip percentages are only 6.5% in the peak direction and under 5% in the off-peak.

II.2.2.3 Travel Times

Table 5 shows the congested travel times and speeds for the Daily, AM Peak, and PM Peak scenarios for Alternative 8, in both the base and future years, compared to corresponding “do-nothing” scenarios. The table shows that if Scenario 8b (the faster bypass) had been in place in the year 2000, it would have had a moderate impact, improving travel time and speed by 6 and 8% in each direction. By the year 2030, the model predicts that without any improvements, average congested speeds will fall by more than half, and travel times more than double. With the Scenario 8b bypass in place in 2030, travel times are about 40% lower and average speed is higher by 70%, westbound, and 80%, eastbound, than without them. Congestion is somewhat higher in Scenario 8b than in the base (2000 Do-Nothing) scenario, but is much closer to the base values than the 2030 do-nothing values.

During the AM and PM peak periods, the congestion benefits of the Fast Bypass (8b) are more pronounced in the peak directions, and are greater than the percentage improvements in the daily scenario. During the AM peak, the Scenario 8b improvements deliver a 46% improvement in travel time and 85% improvement in average speed in the eastbound lanes of the Lawrenceburg / Greendale segment of US 50. During the PM peak, the travel time and speed improvements in the westbound direction are 26% and 36%, respectively.

The Fast Bypass scenario delivers better travel time savings in downtown Lawrenceburg than Scenario 5, which directly improves capacity on US 50. This may or may not reflect reality since, as noted, Scenario 5 assumes only a moderate increase in traffic capacity, from 2320 to 2700 vph in each direction.

Table 5: Travel time savings resulting from Alternative 8 improvements for Scenarios a and b, along US 50 between the intersections with Old US 50 and I-275.

US 50	Eastbound / Northbound			Westbound / Southbound			
Year 2000	Year 2000, Daily						
	Do-Nothing	8a	8b		Do-Nothing	8a	8b
Travel Time (min)	4.71	4.67	4.41		4.70	4.62	4.4
Impr over DN	n/a	-0.04	-0.30		n/a	-0.08	-0.30
Pct Impr over DN	n/a	-1%	-6%		n/a	-2%	-6%
Avg Speed (mph)	36.82	37.13	39.32		36.89	38.05	39.95
Impr over DN	n/a	0.32	2.50		n/a	1.16	3.06
Pct Impr over DN	n/a	1%	7%		n/a	3%	8%
Year 2030	Year 2030, Daily						
	Do-Nothing	8a	8b		Do-Nothing	8a	8b
Travel Time (min)	11.54	8.89	6.42		9.87	7.54	5.9
Impr over DN	n/a	-2.65	-5.12		n/a	-2.33	-3.97
Pct Impr over DN	n/a	-23%	-44%		n/a	-24%	-40%
Avg Speed (mph)	15.03	19.51	27.01		17.57	23.32	29.80
Impr over DN	n/a	4.48	11.98		n/a	5.75	12.23
Pct Impr over DN	n/a	30%	80%		n/a	33%	70%
Year 2030	Year 2030, AM Peak Pd						
	Do-Nothing	8a	8b		Do-Nothing	8a	8b
Travel Time (min)	16.39	11.58	8.88		7.90	6.69	6.25
Impr over DN	n/a	-4.81	-7.51		n/a	-1.21	-1.65
Pct Impr over DN	n/a	-29%	-46%		n/a	-15%	-21%
Avg Speed (mph)	11.90	16.84	21.96		24.68	29.15	31.20
Impr over DN		4.94	10.06		n/a	4.46	6.52
Pct Impr over DN		42%	85%		n/a	18%	26%
Year 2030	Year 2030, PM Peak Pd						
	Do-Nothing	8a	8b		Do-Nothing	8a	8b
Travel Time (min)	8.33	6.86	6.52		10.53	8.57	7.84
Impr over DN	n/a	-1.47	-1.81		n/a	-1.96	-2.69
Pct Impr over DN	n/a	-18%	-22%		n/a	-19%	-26%
Avg Speed (mph)	23.41	28.43	29.91		18.52	23.03	25.18
Impr over DN	n/a	5.02	6.50		n/a	4.52	6.66
Pct Impr over DN	n/a	21%	28%		n/a	24%	36%

II.2.2.4 Ridge Ave

As discussed earlier, Ridge Avenue serves as an alternate route to US 50 through Greendale and/or Lawrenceburg, from the east side of the Tanners Creek Bridge to the I-275 entrance ramps. Scenario 8a has the impact one would anticipate on Ridge Ave;

volumes drop as trips are displaced to the Bypass link or to US 50. In the 2030 scenario, daily traffic on Ridge Ave. is about 20% lower than in the corresponding Do-Nothing scenario.

The faster bypass scenario (8b) shows a surprising result. Although the faster bypass carries more volume than the slower bypass, Ridge Avenue also carries more volume in the faster bypass scenario than in the slower. This indicates that the fast bypass is attractive enough to divert trips from generators at or near the southern end of Ridge Avenue which would otherwise use the US 50 bridge across Tanners Creek. These trips instead find it more expedient to follow Ridge Avenue to State Route 1 to the new Bypass link, to reach their destinations.

II.3. Comparison of Alternatives 5 and 8

Two basic alternatives improvements to the US 50 corridor have been examined. Alternative 5 involves adding capacity to US 50 through downtown Lawrenceburg, without adding any substantial new alignment to the study area. Three scenarios of this alternative have been analyzed, representing low, medium, and high capacity improvements.

Alternative 8 involves adding a new link connecting State Route 48 and State Route 1 to the north of Lawrenceburg. This would create a second bridge across Tanners Creek, and an alternate route to US 50 through Lawrenceburg. Two scenarios of this alternative were created, which represent a slower, lower-capacity alignment, and a faster, higher-capacity alternative.

Travel time savings and speed improvements through Lawrenceburg were studied and the improvements shown in Tables 3 (p. 11) and 5 (p. 16). Scenario 5c, which represents an aggressive increase in capacity along US 50 through Lawrenceburg and Greendale, shows the best improvements, with projected 2030 travel times and speeds more favorable than even current conditions. However, this scenario represents capacity improvements that are very high and probably infeasible.

The scenario with the next highest travel time improvements is Scenario 8b, the faster bypass scenario. This is noteworthy, because this scenario removes local traffic and a small number of through trips from the US 50 corridor, yet leads to better travel time improvements on US 50 through Lawrenceburg than a 50% improvement of capacity on the affected sections would. This scenario also reduces AADT on southern sections of State Route 48 (due to diversion to the bypass link), and creates a second crossing of Tanners Creek.

Even a modestly designed bypass (represented in Scenario 8a), which carries exclusively local traffic, performs as well as modest capacity improvements (Scenario 5a) in reducing travel time through Lawrenceburg.

Appendix I: TranPlan code for Sub-model Creation

Sub-model Process 1:

Combine purposes from final vehicle trip-table output of the full OKI RTDM (vehtrp.*tp*) to generate all-vehicle trip table. Then load network (Equilibrium Hwy Load) with vehicle trip table and create loaded history files (SELHsub.*tp*) for further analysis.

(Note *tp* = Time Period = {am, md, pm, nt})

```
$matrix manipulate
$files
    input file = tman1, user id = $vehtrp.am$
    output file = tman2, user id = $vehtrp2.am$
$headers
    Combined auto and truck trips
$data
    tman2,t1 = tman1,t1
    tman2,t2 = tman1,t2 + tman1,t3 + tman1,t4 + tman1,t5
$end tp function
$SYS ECHO ##### LOADING HIGHWAY NETWORK #####
$SYS ECHO ##### Equilibrium Assignment #####
$EQUILIBRIUM HIGHWAY LOAD
$FILES
    INPUT FILE = HWYNET, USER ID = $hwynet.am$
    INPUT FILE = HWYTRIP, USER ID = $vehtrp2.am$
    INPUT FILE = TRNDATA, USER ID = $turnpen.txt$
    OUTPUT FILE = LODHIST, USER ID = $loadSub.am$
    OUTPUT FILE = SELHIST, USER ID = $SELHsub.am$
$HEADERS
    OKI/MVRPC TRAVEL DEMAND FORECASTING MODEL
    AM Peak LOS E Assignment - Time and Distance
    HIGHWAY ASSIGNMENT
$OPTIONS
    TURN FILE
$PARAMETERS
    damping factor = 0.5
    eps = 0.02
    equilibrium iterations = 50
    confac = 0.53
    time factor = 0.414
    distance factor = 0.46
    selected modes = 1-2
    Load selected links = 10855-8982, 11068-11069, 8983-10860, 10823-
10824, 6416-10590, 10596-10597, 2475-3234,
    2474-6445, 2473-6358, 2472-6357, 10610-10611, 3233-10096
    One way selected links = 10855-8982, 11068-11069, 8983-10860,
10823-10824, 6416-10590, 10590-6416, 10596-10597,
    10597-10596, 2475-3234, 3234-2475, 2474-6445, 6445-2474, 2473-
6358, 6358-2473, 2472-6357, 6357-2472, 10610-10611,
    10611-10610, 3233-10096, 10096-3233
$DATA
    ASSIGNMENT GROUP = 1, XYDATA=(0.01,1.0000)
                                (0.20,1.0000)
                                (0.40,0.9999)
                                (0.60,0.9967)
```

```
(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)
ASSIGNMENT GROUP = 2, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9989)
(0.60,0.9707)
(0.80,0.7601)
(1.00,0.3390)
(1.20,0.1038)
(1.40,0.0319)
(1.60,0.0110)
(1.80,0.0042)
(2.00,0.0018)
(2.20,0.0008)
(2.40,0.0004)
ASSIGNMENT GROUP = 3, XYDATA=(0.01,1.0000)
(0.20,0.9989)
(0.40,0.9733)
(0.60,0.8459)
(0.80,0.5888)
(1.00,0.3356)
(1.20,0.1773)
(1.40,0.0950)
(1.60,0.0533)
(1.80,0.0314)
(2.00,0.0195)
(2.20,0.0126)
(2.40,0.0084)
ASSIGNMENT GROUP = 4, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9973)
(0.60,0.9523)
(0.80,0.7169)
(1.00,0.3378)
(1.20,0.1211)
(1.40,0.0436)
(1.60,0.0172)
(1.80,0.0074)
(2.00,0.0035)
(2.20,0.0018)
(2.40,0.0009)
ASSIGNMENT GROUP = 5, XYDATA=(0.01,1.0000)
(0.20,0.9999)
(0.40,0.9906)
(0.60,0.8979)
(0.80,0.6020)
(1.00,0.2786)
(1.20,0.1123)
(1.40,0.0469)
(1.60,0.0213)
```

```

(1.80,0.0105)
(2.00,0.0055)
(2.20,0.0031)
(2.40,0.0018)
ASSIGNMENT GROUP = 7, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)
ASSIGNMENT GROUP = 8, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)

$END TP FUNCTION
$matrix manipulate
$files
    input file = tman1, user id = $vehtrp.md$
    output file = tman2, user id = $vehtrp2.md$
$headers
    Combined auto and truck trips
$data
    tman2,t1 = tman1,t1
    tman2,t2 = tman1,t2 + tman1,t3 + tman1,t4 + tman1,t5
$end tp function
$EQUILIBRIUM HIGHWAY LOAD
$FILES
    INPUT FILE = HWYNET, USER ID = $hwynet.md$
    INPUT FILE = HWYTRIP, USER ID = $vehtrp2.md$
    INPUT FILE = TRNDATA, USER ID = $turnpen.txt$
    OUTPUT FILE = LODHIST, USER ID = $loadSub.md$
    OUTPUT FILE = SELHIST, USER ID = $SELHsub.md$
$HEADERS
    MVRPC/OKI TRAVEL DEMAND FORECASTING MODEL
    Midday LOS E Assignment - Time and Distance
    HIGHWAY ASSIGNMENT
$OPTIONS
    TURN FILE
$PARAMETERS
    damping factor = 0.5
    eps = 0.02

```



```
equilibrium iterations = 30
confac = 0.23
time factor = 0.414
distance factor = 0.46
selected modes = 1-2
Load selected links = 10855-8982, 11068-11069, 8983-10860, 10823-
10824, 6416-10590, 10596-10597, 2475-3234,
2474-6445, 2473-6358, 2472-6357, 10610-10611, 3233-10096
One way selected links = 10855-8982, 11068-11069, 8983-10860,
10823-10824, 6416-10590, 10590-6416, 10596-10597,
10597-10596, 2475-3234, 3234-2475, 2474-6445, 6445-2474, 2473-
6358, 6358-2473, 2472-6357, 6357-2472, 10610-10611,
10611-10610, 3233-10096, 10096-3233
$DATA
  ASSIGNMENT GROUP = 1, XYDATA=(0.01,1.0000)
                                (0.20,1.0000)
                                (0.40,0.9999)
                                (0.60,0.9967)
                                (0.80,0.9675)
                                (1.00,0.8333)
                                (1.20,0.5376)
                                (1.40,0.2531)
                                (1.60,0.1043)
                                (1.80,0.0434)
                                (2.00,0.0192)
                                (2.20,0.0090)
                                (2.40,0.0045)
  ASSIGNMENT GROUP = 2, XYDATA=(0.01,1.0000)
                                (0.20,1.0000)
                                (0.40,0.9989)
                                (0.60,0.9707)
                                (0.80,0.7601)
                                (1.00,0.3390)
                                (1.20,0.1038)
                                (1.40,0.0319)
                                (1.60,0.0110)
                                (1.80,0.0042)
                                (2.00,0.0018)
                                (2.20,0.0008)
                                (2.40,0.0004)
  ASSIGNMENT GROUP = 3, XYDATA=(0.01,1.0000)
                                (0.20,0.9989)
                                (0.40,0.9733)
                                (0.60,0.8459)
                                (0.80,0.5888)
                                (1.00,0.3356)
                                (1.20,0.1773)
                                (1.40,0.0950)
                                (1.60,0.0533)
                                (1.80,0.0314)
                                (2.00,0.0195)
                                (2.20,0.0126)
                                (2.40,0.0084)
  ASSIGNMENT GROUP = 4, XYDATA=(0.01,1.0000)
                                (0.20,1.0000)
                                (0.40,0.9973)
                                (0.60,0.9523)
```

```

(0.80,0.7169)
(1.00,0.3378)
(1.20,0.1211)
(1.40,0.0436)
(1.60,0.0172)
(1.80,0.0074)
(2.00,0.0035)
(2.20,0.0018)
(2.40,0.0009)
ASSIGNMENT GROUP = 5, XYDATA=(0.01,1.0000)
(0.20,0.9999)
(0.40,0.9906)
(0.60,0.8979)
(0.80,0.6020)
(1.00,0.2786)
(1.20,0.1123)
(1.40,0.0469)
(1.60,0.0213)
(1.80,0.0105)
(2.00,0.0055)
(2.20,0.0031)
(2.40,0.0018)
ASSIGNMENT GROUP = 7, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
(0.80,0.9675)
(1.00,0.8333)
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(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)
ASSIGNMENT GROUP = 8, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)
$END TP FUNCTION
$matrix manipulate
$files
    input file = tman1, user id = $vehtrp.pm$
    output file = tman2, user id = $vehtrp2.pm$
$headers
    Combined auto and truck trips
$data
    tman2,t1 = tman1,t1

```

```

      tman2,t2 = tman1,t2 + tman1,t3 + tman1,t4 + tman1,t5
$end tp function
$EQUILIBRIUM HIGHWAY LOAD
$FILES
  INPUT FILE = HWYNET, USER ID = $hwynt.pm$
  INPUT FILE = HWYTRIP, USER ID = $vehtrp2.pm$
  INPUT FILE = TRNDATA, USER ID = $turnpen.txt$
  OUTPUT FILE = LODHIST, USER ID = $loadSub.pm$
  OUTPUT FILE = SELHIST, USER ID = $SELHsub.pm$
$HEADERS
      MVRPC/OKI TRAVEL DEMAND FORECASTING MODEL
      PM Peak LOS E Assignment - Time and Distance
      HIGHWAY ASSIGNMENT
$OPTIONS
  TURN FILE
$PARAMETERS
  damping factor = 0.5
  eps = 0.02
  equilibrium iterations = 50
  confac = 0.35
  time factor = 0.414
  distance factor = 0.46
  selected modes = 1-2
  Load selected links = 10855-8982, 11068-11069, 8983-10860, 10823-
10824, 6416-10590, 10596-10597, 2475-3234,
  2474-6445, 2473-6358, 2472-6357, 10610-10611, 3233-10096
  One way selected links = 10855-8982, 11068-11069, 8983-10860,
10823-10824, 6416-10590, 10590-6416, 10596-10597,
  10597-10596, 2475-3234, 3234-2475, 2474-6445, 6445-2474, 2473-
6358, 6358-2473, 2472-6357, 6357-2472, 10610-10611,
  10611-10610, 3233-10096, 10096-3233
$DATA
  ASSIGNMENT GROUP = 1, XYDATA=(0.01,1.0000)
                                (0.20,1.0000)
                                (0.40,0.9999)
                                (0.60,0.9967)
                                (0.80,0.9675)
                                (1.00,0.8333)
                                (1.20,0.5376)
                                (1.40,0.2531)
                                (1.60,0.1043)
                                (1.80,0.0434)
                                (2.00,0.0192)
                                (2.20,0.0090)
                                (2.40,0.0045)
  ASSIGNMENT GROUP = 2, XYDATA=(0.01,1.0000)
                                (0.20,1.0000)
                                (0.40,0.9989)
                                (0.60,0.9707)
                                (0.80,0.7601)
                                (1.00,0.3390)
                                (1.20,0.1038)
                                (1.40,0.0319)
                                (1.60,0.0110)
                                (1.80,0.0042)
                                (2.00,0.0018)
                                (2.20,0.0008)

```

```
(2.40,0.0004)
ASSIGNMENT GROUP = 3, XYDATA=(0.01,1.0000)
(0.20,0.9989)
(0.40,0.9733)
(0.60,0.8459)
(0.80,0.5888)
(1.00,0.3356)
(1.20,0.1773)
(1.40,0.0950)
(1.60,0.0533)
(1.80,0.0314)
(2.00,0.0195)
(2.20,0.0126)
(2.40,0.0084)
ASSIGNMENT GROUP = 4, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9973)
(0.60,0.9523)
(0.80,0.7169)
(1.00,0.3378)
(1.20,0.1211)
(1.40,0.0436)
(1.60,0.0172)
(1.80,0.0074)
(2.00,0.0035)
(2.20,0.0018)
(2.40,0.0009)
ASSIGNMENT GROUP = 5, XYDATA=(0.01,1.0000)
(0.20,0.9999)
(0.40,0.9906)
(0.60,0.8979)
(0.80,0.6020)
(1.00,0.2786)
(1.20,0.1123)
(1.40,0.0469)
(1.60,0.0213)
(1.80,0.0105)
(2.00,0.0055)
(2.20,0.0031)
(2.40,0.0018)
ASSIGNMENT GROUP = 7, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)
ASSIGNMENT GROUP = 8, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
```

```

(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)

$END TP FUNCTION
$matrix manipulate
$files
    input file = tman1, user id = $vehtrp.nt$
    output file = tman2, user id = $vehtrp2.nt$
$headers
    Combined auto and truck trips
$data
    tman2,t1 = tman1,t1
    tman2,t2 = tman1,t2 + tman1,t3 + tman1,t4 + tman1,t5
$end tp function
$EQUILIBRIUM HIGHWAY LOAD
$FILES
    INPUT FILE = HWYNET, USER ID = $hwynet.md$
    INPUT FILE = HWYTRIP, USER ID = $vehtrp2.nt$
    INPUT FILE = TRNDATA, USER ID = $turnpen.txt$
    OUTPUT FILE = LODHIST, USER ID = $loadSub.nt$
    OUTPUT FILE = SELHIST, USER ID = $SELHsub.nt$
$HEADERS
    MVRPC/OKI TRAVEL DEMAND FORECASTING MODEL
    Night LOS E Assignment - Time and Distance
    HIGHWAY ASSIGNMENT
$OPTIONS
    TURN FILE
$PARAMETERS
    damping factor = 0.5
    eps = 0.02
    equilibrium iterations = 30
    confac = 0.36
    time factor = 0.414
    distance factor = 0.46
    selected modes = 1-2
    Load selected links = 10855-8982, 11068-11069, 8983-10860, 10823-
10824, 6416-10590, 10596-10597, 2475-3234,
    2474-6445, 2473-6358, 2472-6357, 10610-10611, 3233-10096
    One way selected links = 10855-8982, 11068-11069, 8983-10860,
10823-10824, 6416-10590, 10590-6416, 10596-10597,
    10597-10596, 2475-3234, 3234-2475, 2474-6445, 6445-2474, 2473-
6358, 6358-2473, 2472-6357, 6357-2472, 10610-10611,
    10611-10610, 3233-10096, 10096-3233
$DATA
    ASSIGNMENT GROUP = 1, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)

```

```
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)
ASSIGNMENT GROUP = 2, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9989)
(0.60,0.9707)
(0.80,0.7601)
(1.00,0.3390)
(1.20,0.1038)
(1.40,0.0319)
(1.60,0.0110)
(1.80,0.0042)
(2.00,0.0018)
(2.20,0.0008)
(2.40,0.0004)
ASSIGNMENT GROUP = 3, XYDATA=(0.01,1.0000)
(0.20,0.9989)
(0.40,0.9733)
(0.60,0.8459)
(0.80,0.5888)
(1.00,0.3356)
(1.20,0.1773)
(1.40,0.0950)
(1.60,0.0533)
(1.80,0.0314)
(2.00,0.0195)
(2.20,0.0126)
(2.40,0.0084)
ASSIGNMENT GROUP = 4, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9973)
(0.60,0.9523)
(0.80,0.7169)
(1.00,0.3378)
(1.20,0.1211)
(1.40,0.0436)
(1.60,0.0172)
(1.80,0.0074)
(2.00,0.0035)
(2.20,0.0018)
(2.40,0.0009)
ASSIGNMENT GROUP = 5, XYDATA=(0.01,1.0000)
(0.20,0.9999)
(0.40,0.9906)
(0.60,0.8979)
(0.80,0.6020)
(1.00,0.2786)
(1.20,0.1123)
(1.40,0.0469)
(1.60,0.0213)
(1.80,0.0105)
(2.00,0.0055)
(2.20,0.0031)
```

```

(2.40,0.0018)
ASSIGNMENT GROUP = 7, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)
ASSIGNMENT GROUP = 8, XYDATA=(0.01,1.0000)
(0.20,1.0000)
(0.40,0.9999)
(0.60,0.9967)
(0.80,0.9675)
(1.00,0.8333)
(1.20,0.5376)
(1.40,0.2531)
(1.60,0.1043)
(1.80,0.0434)
(2.00,0.0192)
(2.20,0.0090)
(2.40,0.0045)
$END TP FUNCTION
```


Sub-model Process 2:

Create sub-area trip table using all-vehicle trip table (vehtrp2.tp) and selected-link history (SELHsub.tp) files generated in Process 1.

```
$EXTRACT SUBAREA TRIP TABLE
$FILES
  INPUT FILE = VOLUME, USER ID = $vehtrp2.am$
  INPUT FILE = SELHIST, USER ID = $SELHsub.am$
  OUTPUT FILE = SUBVOL, USER ID = $SubAM.trp$
$HEADERS
  OKI/MVRPC TRAVEL DEMAND FORECASTING MODEL
    AM Peak - US 50, Lawrenceburg, IN, SubArea Analysis
$PARAMETERS
  NUMBER OF INTERNAL ZONES = 22
  NUMBER OF STATIONS = 10
$DATA
  INTERNAL ZONE CORRESPONDENCE = 1551-1, 1552-2, 1553-3, 1554-4, 1555-
5, 1556-6, 1557-7, 1558-8, 1559-9, 1560-10, 1561-11, 1562-12, 1563-
13, 1564-14, 1565-15, 1580-16, 1583-17, 1584-18, 1585-19, 1586-20,
1587-21, 1608-22
  ENTRY STATION=23, LINK=3233-10096
  ENTRY STATION=24, LINK=10855-8982
  ENTRY STATION=25, LINK=11068-11069
  ENTRY STATION=26, LINK=6416-10590
  ENTRY STATION=27, LINK=10596-10597
  ENTRY STATION=28, LINK=2475-3234
  ENTRY STATION=29, LINK=2474-6445
  ENTRY STATION=30, LINK=2473-6358
  ENTRY STATION=31, LINK=2472-6357
  ENTRY STATION=32, LINK=10611-10610
  EXIT STATION=23, LINK=10096-3233
  EXIT STATION=24, LINK=8983-10860
  EXIT STATION=25, LINK=10823-10824
  EXIT STATION=26, LINK=10590-6416
  EXIT STATION=27, LINK=10597-10596
  EXIT STATION=28, LINK=3234-2475
  EXIT STATION=29, LINK=6445-2474
  EXIT STATION=30, LINK=6358-2473
  EXIT STATION=31, LINK=6357-2472
  EXIT STATION=32, LINK=10610-10611
$END TP FUNCTION
$EXTRACT SUBAREA TRIP TABLE
$FILES
  INPUT FILE = VOLUME, USER ID = $vehtrp2.md$
  INPUT FILE = SELHIST, USER ID = $SELHsub.md$
  OUTPUT FILE = SUBVOL, USER ID = $SubMD.trp$
$HEADERS
  OKI/MVRPC TRAVEL DEMAND FORECASTING MODEL
    Midday - US 50, Lawrenceburg, IN, SubArea Analysis
$PARAMETERS
  NUMBER OF INTERNAL ZONES = 22
  NUMBER OF STATIONS = 10
$DATA
  INTERNAL ZONE CORRESPONDENCE = 1551-1, 1552-2, 1553-3, 1554-4, 1555-
5, 1556-6, 1557-7, 1558-8, 1559-9, 1560-10, 1561-11, 1562-12, 1563-
```

```
13, 1564-14, 1565-15, 1580-16, 1583-17, 1584-18, 1585-19, 1586-20,
1587-21, 1608-22
ENTRY STATION=23, LINK=3233-10096
ENTRY STATION=24, LINK=10855-8982
ENTRY STATION=25, LINK=11068-11069
ENTRY STATION=26, LINK=6416-10590
ENTRY STATION=27, LINK=10596-10597
ENTRY STATION=28, LINK=2475-3234
ENTRY STATION=29, LINK=2474-6445
ENTRY STATION=30, LINK=2473-6358
ENTRY STATION=31, LINK=2472-6357
ENTRY STATION=32, LINK=10611-10610
EXIT STATION=23, LINK=10096-3233
EXIT STATION=24, LINK=8983-10860
EXIT STATION=25, LINK=10823-10824
EXIT STATION=26, LINK=10590-6416
EXIT STATION=27, LINK=10597-10596
EXIT STATION=28, LINK=3234-2475
EXIT STATION=29, LINK=6445-2474
EXIT STATION=30, LINK=6358-2473
EXIT STATION=31, LINK=6357-2472
EXIT STATION=32, LINK=10610-10611
$END TP FUNCTION
$EXTRACT SUBAREA TRIP TABLE
$FILES
  INPUT FILE = VOLUME, USER ID = $vehtrp2.pm$
  INPUT FILE = SELHIST, USER ID = $SELHsub.pm$
  OUTPUT FILE = SUBVOL, USER ID = $SubPM.trp$
$HEADERS
  OKI/MVRPC TRAVEL DEMAND FORECASTING MODEL
  PM Peak - US 50, Lawrenceburg, IN, SubArea Analysis
$PARAMETERS
  NUMBER OF INTERNAL ZONES = 22
  NUMBER OF STATIONS = 10
$DATA
  INTERNAL ZONE CORRESPONDENCE = 1551-1, 1552-2, 1553-3, 1554-4, 1555-
5, 1556-6, 1557-7, 1558-8, 1559-9, 1560-10, 1561-11, 1562-12, 1563-
13, 1564-14, 1565-15, 1580-16, 1583-17, 1584-18, 1585-19, 1586-20,
1587-21, 1608-22
ENTRY STATION=23, LINK=3233-10096
ENTRY STATION=24, LINK=10855-8982
ENTRY STATION=25, LINK=11068-11069
ENTRY STATION=26, LINK=6416-10590
ENTRY STATION=27, LINK=10596-10597
ENTRY STATION=28, LINK=2475-3234
ENTRY STATION=29, LINK=2474-6445
ENTRY STATION=30, LINK=2473-6358
ENTRY STATION=31, LINK=2472-6357
ENTRY STATION=32, LINK=10611-10610
EXIT STATION=23, LINK=10096-3233
EXIT STATION=24, LINK=8983-10860
EXIT STATION=25, LINK=10823-10824
EXIT STATION=26, LINK=10590-6416
EXIT STATION=27, LINK=10597-10596
EXIT STATION=28, LINK=3234-2475
EXIT STATION=29, LINK=6445-2474
EXIT STATION=30, LINK=6358-2473
```

```
EXIT STATION=31, LINK=6357-2472
EXIT STATION=32, LINK=10610-10611
$END TP FUNCTION
$EXTRACT SUBAREA TRIP TABLE
$FILES
  INPUT FILE = VOLUME, USER ID = $vehtrp2.nt$
  INPUT FILE = SELHIST, USER ID = $SELHsub.nt$
  OUTPUT FILE = SUBVOL, USER ID = $SubNT.trp$
$HEADERS
  OKI/MVRPC TRAVEL DEMAND FORECASTING MODEL
    Night - US 50, Lawrenceburg, IN, SubArea Analysis
$PARAMETERS
  NUMBER OF INTERNAL ZONES = 22
  NUMBER OF STATIONS = 10
$DATA
  INTERNAL ZONE CORRESPONDENCE = 1551-1, 1552-2, 1553-3, 1554-4, 1555-
5, 1556-6, 1557-7, 1558-8, 1559-9, 1560-10, 1561-11, 1562-12, 1563-
13, 1564-14, 1565-15, 1580-16, 1583-17, 1584-18, 1585-19, 1586-20,
1587-21, 1608-22
  ENTRY STATION=23, LINK=3233-10096
  ENTRY STATION=24, LINK=10855-8982
  ENTRY STATION=25, LINK=11068-11069
  ENTRY STATION=26, LINK=6416-10590
  ENTRY STATION=27, LINK=10596-10597
  ENTRY STATION=28, LINK=2475-3234
  ENTRY STATION=29, LINK=2474-6445
  ENTRY STATION=30, LINK=2473-6358
  ENTRY STATION=31, LINK=2472-6357
  ENTRY STATION=32, LINK=10611-10610
  EXIT STATION=23, LINK=10096-3233
  EXIT STATION=24, LINK=8983-10860
  EXIT STATION=25, LINK=10823-10824
  EXIT STATION=26, LINK=10590-6416
  EXIT STATION=27, LINK=10597-10596
  EXIT STATION=28, LINK=3234-2475
  EXIT STATION=29, LINK=6445-2474
  EXIT STATION=30, LINK=6358-2473
  EXIT STATION=31, LINK=6357-2472
  EXIT STATION=32, LINK=10610-10611
$END TP FUNCTION
```

Sub-model Process 3:

Combine trip tables from all time periods to generate a daily, all-vehicle trip-table.

```
$matrix manipulate
$files
    input file = tman1, user id = $subam.trp$
    input file = tman2, user id = $submd.trp$
    input file = tman3, user id = $subpm.trp$
    input file = tman4, user id = $subnt.trp$
    output file = tman5, user id = $subd_a.trp$
$headers
    Combine subarea time periods for total daily subarea TT
$data
    tman5,t1 = tman1,t1 + tman2,t1 + tman3,t1 + tman4,t1
    tman5,t2 = tman1,t2 + tman2,t2 + tman3,t2 + tman4,t2
$end tp function
$matrix manipulate
$files
    input file = tman1, user id = $subd_a.trp$
    output file = tman2, user id = $subday.trp$
$headers
    Combine subarea time periods for total daily subarea TT
$data
    tman2,t1 = tman1,t1 + tman1,t2
$end tp function
```

Sub-model Process 4:

Extract the sub-area network from the OKI RTDM model network, representing the study area.

```
$EXTRACT SUBAREA NETWORK
$FILES
  INPUT FILE = OLDNET, USER ID = $hwynet.am$
  OUTPUT FILE = HWYNET, USER ID = $SubNET.all$
$HEADERS
  OKI/MVRPC TRAVEL DEMAND FORECASTING MODEL
  US 50, Dearborn Co, IN, Subarea Network All
$PARAMETERS
  NUMBER OF INTERNAL ZONES = 22
  NUMBER OF STATIONS = 10
$DATA
  INTERNAL ZONE CORRESPONDENCE = 1551-1, 1552-2, 1553-3, 1554-4, 1555-
5, 1556-6, 1557-7, 1558-8, 1559-9, 1560-10, 1561-11, 1562-12, 1563-
13, 1564-14, 1565-15, 1580-16, 1583-17, 1584-18, 1585-19, 1586-20,
1587-21, 1608-22
  ENTRY STATION=23, LINK=3233-10096
  ENTRY STATION=24, LINK=10855-8982
  ENTRY STATION=25, LINK=11068-11069
  ENTRY STATION=26, LINK=6416-10590
  ENTRY STATION=27, LINK=10596-10597
  ENTRY STATION=28, LINK=2475-3234
  ENTRY STATION=29, LINK=2474-6445
  ENTRY STATION=30, LINK=2473-6358
  ENTRY STATION=31, LINK=2472-6357
  ENTRY STATION=32, LINK=10611-10610
  EXIT STATION=23, LINK=10096-3233
  EXIT STATION=24, LINK=8983-10860
  EXIT STATION=25, LINK=10823-10824
  EXIT STATION=26, LINK=10590-6416
  EXIT STATION=27, LINK=10597-10596
  EXIT STATION=28, LINK=3234-2475
  EXIT STATION=29, LINK=6445-2474
  EXIT STATION=30, LINK=6358-2473
  EXIT STATION=31, LINK=6357-2472
  EXIT STATION=32, LINK=10610-10611
$END TP FUNCTION
```

Appendix II: ODME Set-up, Report, and Analysis

A. WSTCAL / ODME Report File:

INPUT SUMMARY:

US 50, Dearborn Co, IN *** Adjust 2000 trips to '01 counts (02 for I-275)

Report File: ODME.REP	
Input Data: MEMJ.DAT	Zones: 32
Network: SUBNET.ALL	Zones: 32
Input Trips: SUBDAY.TRP	Zones: 32
New Trips: ODME.TRP	Zones: 32

US 50, Dearborn Co, IN *** Adjust 2000 trips to '01 counts (02 for I-275)

One Way Links with Observed Counts

Anode	Bnode	Count
6398	6399	3840
6399	6398	3840
6397	6398	5155
6398	6397	5155
10607	10608	7680
10608	10607	7680
6425	6426	13995
6426	6425	13995
6424	6425	18675
6425	6424	18675
10605	10604	17775
10604	10605	17775
6422	6421	20965
6421	6422	20965
10570	10569	17475
10569	10570	17475
6398	6438	1705
6438	6398	1705
6426	6429	6960
6429	6426	6960
6426	10606	3455
10606	6426	3455
6424	11240	2420
11240	6424	2420
6422	10601	6320
10601	6422	6320
6396	10599	6985
10599	6396	6985
24	8982	16005
25	11069	17515
26	10590	2145
10590	26	2145
27	10597	5435
10597	27	5435
28	3234	6140
3234	28	6140

```

    29  6445          645
    6445   29          645
    30  6358          385
    6358   30          385
    10610  32          3895
    32 10610          3895
    23 10096          6800
    10096  23          6800
    8983   24          16005
    10823  25          17515
    46 One-way Count Links utilized

```

OUTPUT SUMMARY:

US 50, Dearborn Co, IN *** Adjust 2000 trips to '01 counts (02 for I-275)

Summary of Adjustment Factors input to Iteration 10

ANode	BNode	Count	Load	Factor	ANode	BNode	Count	Load	Factor
6398	6399	3840	3596	1.07	6399	6398	3840	3602	1.07
6397	6398	5155	5225	.99	6398	6397	5155	5235	.98
10607	10608	7680	7209	1.07	10608	10607	7680	7209	1.07
6425	6426	13995	16192	.86	6426	6425	13995	16221	.86
6424	6425	18675	17597	1.06	6425	6424	18675	17598	1.06
10605	10604	17775	16926	1.05	10604	10605	17775	16928	1.05
6422	6421	20965	20968	1.00	6421	6422	20965	20963	1.00
10570	10569	17475	18600	.94	10569	10570	17475	18490	.95
6398	6438	1705	2042	.83	6438	6398	1705	2046	.83
6426	6429	6960	6465	1.08	6429	6426	6960	6466	1.08
6426	10606	3455	4722	.73	10606	6426	3455	4738	.73
6424	11240	2420	1978	1.22	11240	6424	2420	1988	1.22
6422	10601	6320	6060	1.04	10601	6422	6320	6061	1.04
6396	10599	6985	7054	.99	10599	6396	6985	7101	.98
24	8982	16005	15637	1.02	25	11069	17515	17508	1.00
26	10590	2145	2637	.81	10590	26	2145	2662	.81
27	10597	5435	5408	1.00	10597	27	5435	5410	1.00
28	3234	6140	4810	1.28	3234	28	6140	4801	1.28
29	6445	645	627	1.03	6445	29	645	623	1.04
30	6358	385	374	1.03	6358	30	385	377	1.02
10610	32	3895	4181	.93	32	10610	3895	4179	.93
23	10096	6800	6661	1.02	10096	23	6800	6646	1.02
8983	24	16005	15534	1.03	10823	25	17515	17406	1.01

US 50, Dearborn Co, IN *** Adjust 2000 trips to '01 counts (02 for I-275)

Distribution of Observed versus Estimated Volumes prior to Iteration 10

Number of One Way Links in each Category

		Percent Estimated of Observed												
		25	50	75 !	90	100	110	125 !	150	175	200	200+	Tot	
E	-10000	0	0	0 !	0	0	0	0 !	0	0	0	0	0	
s	- 5000	0	0	0 !	0	0	0	0 !	0	0	0	0	0	

t -	3000	0	0	0 !	0	0	0	0 !	0	0	0	0	0
.	2000	0	0	0 !	0	0	0	0 !	0	0	0	0	0
<hr/>													
-	1000	0	0	0 !	2	2	0	0 !	0	0	0	0	4
-	500	0	0	0 !	0	2	0	0 !	0	0	0	0	2
M -	100	0	0	0 !	2	13	0	0 !	0	0	0	0	15
i	0	0	0	0 !	0	8	0	0 !	0	0	0	0	8
n +	100	0	0	0 !	0	0	4	0 !	0	0	0	0	4
u +	500	0	0	0 !	0	0	3	3 !	0	0	0	0	6
s +	1000	0	0	0 !	0	0	0	1 !	0	0	0	0	1
<hr/>													
+	2000	0	0	0 !	0	0	2	0 !	2	0	0	0	4
O +	3000	0	0	0 !	0	0	0	2 !	0	0	0	0	2
b +	5000	0	0	0 !	0	0	0	0 !	0	0	0	0	0
s +	10000	0	0	0 !	0	0	0	0 !	0	0	0	0	0
.	10000+	0	0	0 !	0	0	0	0 !	0	0	0	0	0
Total	0	0	0	0 !	4	25	9	6 !	2	0	0	0	46

Trips Subject to Adjustment 102517

Trips Not Using Count Links 21770

Total Trips in Trip Table 124287

At end of Iteration 10 Total Trips = 124878. Control Total = 0.

B. Comparison of Trip Tables, pre- and post-ODME.

- Total trip generation falls by 6,390, or 4.9%, in ODME matrix.
- Largest absolute changes in Productions / Attractions are:
 - Zone 10 – P: -2,583 (-19.7%); A: -2,498 (-19.3%)
 - Zone 23 – P: -2,122 (-24.1%); A: -2,562 (-27.8%)
 - Zone 24 – P: 2,251 (16.7%); A: 3,090 (26.7%).
 - Zone 26 – P: - 27.2% (-974); A: -29.6% (-1,102)
 - Zone 29 – P: 63.5% (244); A: 60.0% (236)
 - Zone 30 – P: 63.8% (146); A: 67.1% (151)

Discussion:

- Zone 10 is part of downtown Lawrenceburg. It connects to the network at the same point as Zone 9, which also sees large absolute changes. The ODME model reduces productions and attractions from these zones by about 20%. This may be explained by a higher proportion of intra-zonal or non-motorized trips, the presence of special generators, or a combination of these.
- The remaining zones (23, 24, 26, 29, and 30) are external links to the sub-model. Changes made by the ODME process may be viewed as direct refinements to the model. In addition, although the percentage change for zones 29 and 30 is very large, the unadjusted values are very small, therefore these represent only a minor adjustment to the model as a whole.

Conclusion:

In establishing a calibrated ODME trip table, total trip-making is adjusted by under 5% from the base value. Individual zone production and attraction values are adjusted within a reasonable range. Final modeled link volumes resulting from the ODME table are within 15% of target counts for most links and within 30% for all. We conclude that the ODME table is within acceptable parameters for further modeling use.

Appendix III: FRATAR Set-up and Analysis

A. OKI Model Productions & Attractions, and resultant FRATAR Factors:

Zone	2000 (OKI)		2030 (OKI)		Factors	
	P	A	P	A	P	A
1	5804	5815	6791	6782	1.17	1.17
2	4477	4477	5580	5607	1.25	1.25
3	5643	5676	6084	6084	1.08	1.07
4	1161	1152	1379	1364	1.19	1.18
5	932	941	1192	1173	1.28	1.25
6	3424	3436	4292	4261	1.25	1.24
7	3132	3130	4887	4875	1.56	1.56
8	595	613	673	664	1.13	1.08
9	7741	7674	8691	8548	1.12	1.11
10	13083	12914	13336	13065	1.02	1.01
11	4208	4261	4677	4667	1.11	1.10
12	3932	3910	4296	4266	1.09	1.09
13	1776	1807	2061	2040	1.16	1.13
14	260	260	808	789	3.11	3.03
15	1387	1440	5440	5469	3.92	3.80
16	1936	1882	2395	2424	1.24	1.29
17	1695	1722	1966	1986	1.16	1.15
18	2563	2574	3137	3162	1.22	1.23
19	1294	1295	1611	1599	1.24	1.23
20	2183	2194	3178	3192	1.46	1.45
21	869	879	1225	1212	1.41	1.38
22	751	761	887	868	1.18	1.14
23	8803	9229	13450	14452	1.53	1.57
24	13463	12520	24284	24242	1.80	1.94
25	16423	16480	28854	28179	1.76	1.71
26	3574	3721	3966	4009	1.11	1.08
27	5941	6149	6810	6976	1.15	1.13
28	6194	6252	10194	10241	1.65	1.64
29	384	393	648	618	1.69	1.57
30	229	225	403	381	1.76	1.69
31	2991	3117	4881	5023	1.63	1.61
32	4419	4368	5165	5302	1.17	1.21

B. TranPlan instruction file for FRATAR analysis

```

$FRATAR MODEL
$FILES
    INPUT FILE=FRATIN, USER ID=$ODME.trp$
    OUTPUT FILE=FRATOUT, USER ID=$FRATAR30.trp$
$HEADERS
    2030 US 50, Dearborn Co, IN, Subarea Trip Table
$OPTIONS
    print trip ends
$PARAMETERS

```

```
number of iterations=10
$DATA
FO    1  1    117
FO    2  1    125
FO    3  1    108
FO    4  1    119
FO    5  1    128
FO    6  1    125
FO    7  1    156
FO    8  1    113
FO    9  1    112
FO   10  1    102
FO   11  1    111
FO   12  1    109
FO   13  1    116
FO   14  1    311
FO   15  1    392
FO   16  1    124
FO   17  1    116
FO   18  1    122
FO   19  1    124
FO   20  1    146
FO   21  1    141
FO   22  1    118
FO   23  1    153
FO   24  1    180
FO   25  1    176
FO   26  1    111
FO   27  1    115
FO   28  1    165
FO   29  1    169
FO   30  1    176
FO   31  1    163
FO   32  1    117
FD    1  1    117
FD    2  1    125
FD    3  1    107
FD    4  1    118
FD    5  1    125
FD    6  1    124
FD    7  1    156
FD    8  1    108
FD    9  1    111
FD   10  1    101
FD   11  1    110
FD   12  1    109
FD   13  1    113
FD   14  1    303
FD   15  1    380
FD   16  1    129
FD   17  1    115
FD   18  1    123
FD   19  1    123
FD   20  1    145
FD   21  1    138
FD   22  1    114
FD   23  1    157
```

FD	24	1	194
FD	25	1	171
FD	26	1	108
FD	27	1	113
FD	28	1	164
FD	29	1	157
FD	30	1	169
FD	31	1	161
FD	32	1	121

\$END TP FUNCTION

Appendix IV: Conversion from Daily to AM and PM Peak

Conversion Process 1:

Divide daily ODME matrix by original OKI daily matrix to establish a matrix of ODME factors.

```
$matrix update
$files
    input file = updin, user id = $ODME.trp$
    output file = updout, user id = $odmex100.trp$
$headers
    Determine cell-by-cell ODME factors
$options
$data
    t1, 1-32, 1-32, * 100,,
$end tp function
$matrix manipulate
$files
    input file = tman1, user id = $subday.trp$
    input file = tman2, user id = $odmex100.trp$
    output file = tman3, user id = $odmefact.trp$
$headers
    Determine cell-by-cell ODME factors
$data
    tman3,t1 = tman2,t1 / tman1,t1
$end tp function
```

Conversion Process 2:

Combine separate matrices in each trip table for each time period. Multiply each time period matrix by the ODME factors from Process 1 to achieve a matrix for each time period that is consistent with the daily ODME-calibrated matrix. This gives the final base-year trip tables for the peak periods.

```
$matrix manipulate
$files
    input file = tman1, user id = $subam.trp$
    output file = tman2, user id = $subtotam.trp$
$headers
    Combine 2 AM Trip Tables
$data
    tman2,t1 = tman1,t1 + tman1,t2
$end tp function
$matrix manipulate
$files
    input file = tman1, user id = $subpm.trp$
    output file = tman2, user id = $subtotpm.trp$
$headers
    Combine 2 PM Trip Tables
$data
    tman2,t1 = tman1,t1 + tman1,t2
$end tp function
$matrix manipulate
$files
    input file = tman1, user id = $subtotam.trp$
```

```
        input file = tman2, user id = $odmefact.trp$
        output file = tman3, user id = $A_AM1.trp$
$headers
    Adjust AM Trip Table by ODME daily factors
$data
    tman3,t1 = tman1,t1 * tman2,t1
$end tp function
$matrix manipulate
$files
    input file = tman1, user id = $subtotpm.trp$
    input file = tman2, user id = $odmefact.trp$
    output file = tman3, user id = $A_PM1.trp$
$headers
    Adjust PM Trip Table by ODME daily factors
$data
    tman3,t1 = tman1,t1 * tman2,t1
$end tp function
$matrix update
$files
    input file = updin, user id = $A_AM1.trp$
    output file = updout, user id = $Adj_AM.trp$
$headers
    Determine cell-by-cell ODME factors
$options
$data
    t1, 1-32, 1-32, * 0.01,,
$end tp function
$matrix update
$files
    input file = updin, user id = $A_PM1.trp$
    output file = updout, user id = $Adj_PM.trp$
$headers
    Determine cell-by-cell ODME factors
$options
$data
    t1, 1-32, 1-32, * 0.01,,
$end tp function
```


Conversion Process 3:

Establish FRATAR factors for each time period by dividing the original OKI 2030 values for each time period by OKI 2000 values for the corresponding time period.

OKI Model Productions & Attractions, and resultant FRATAR Factors, for the AM and PM peak periods:

AM Zone	2000 (OKI)		2030 (OKI)		Factors	
	P	A	P	A	P	A
1	1053	820	1265	924	1.20	1.13
2	618	679	756	870	1.22	1.28
3	496	970	542	1039	1.09	1.07
4	333	73	388	100	1.17	1.37
5	258	74	308	119	1.19	1.61
6	631	520	805	644	1.28	1.24
7	388	595	586	966	1.51	1.62
8	68	106	81	128	1.19	1.21
9	912	1449	1015	1652	1.11	1.14
10	912	2453	960	2455	1.05	1.00
11	486	911	550	951	1.13	1.04
12	729	538	786	637	1.08	1.18
13	400	224	449	297	1.12	1.33
14	37	35	82	161	2.22	4.60
15	252	186	734	885	2.91	4.76
16	422	244	513	321	1.22	1.32
17	373	207	435	241	1.17	1.16
18	463	397	576	504	1.24	1.27
19	323	127	392	156	1.21	1.23
20	431	367	591	574	1.37	1.56
21	209	94	274	161	1.31	1.71
22	160	114	194	123	1.21	1.08
23	2093	1684	2939	3189	1.40	1.89
24	3235	2564	4514	4122	1.40	1.61
25	2627	4200	5159	5460	1.96	1.30
26	748	390	967	504	1.29	1.29
27	1566	678	1955	788	1.25	1.16
28	1342	1353	2210	2197	1.65	1.62
29	84	82	141	136	1.68	1.66
30	49	50	86	82	1.76	1.64
31	595	621	980	1000	1.65	1.61
32	1117	605	1098	945	0.98	1.56

PM Zone	2000 (OKI)		2030 (OKI)		Factors	
	P	A	P	A	P	A
1	1633	1811	1883	2140	1.15	1.18
2	1326	1291	1666	1639	1.26	1.27
3	1831	1585	1976	1689	1.08	1.07
4	251	459	297	524	1.18	1.14
5	199	352	274	420	1.38	1.19
6	999	1088	1240	1314	1.24	1.21
7	1012	842	1595	1287	1.58	1.53
8	183	166	212	172	1.16	1.04
9	2515	2056	2837	2299	1.13	1.12
10	4461	3397	4498	3402	1.01	1.00
11	1434	1095	1577	1223	1.10	1.12
12	1106	1204	1219	1322	1.10	1.10
13	462	595	553	644	1.20	1.08
14	80	79	262	211	3.28	2.67
15	375	453	1626	1520	4.34	3.36
16	499	614	612	773	1.23	1.26
17	441	553	505	662	1.15	1.20
18	725	783	890	953	1.23	1.22
19	305	468	386	561	1.27	1.20
20	600	626	872	864	1.45	1.38
21	206	299	307	382	1.49	1.28
22	200	255	232	278	1.16	1.09
23	2270	2976	4329	4372	1.91	1.47
24	3810	3806	5645	5692	1.48	1.50
25	5346	3916	7208	6755	1.35	1.72
26	866	1242	981	1248	1.13	1.00
27	1298	2014	1628	2565	1.25	1.27
28	1820	1836	2994	3024	1.65	1.65
29	113	115	192	177	1.70	1.54
30	66	65	112	108	1.70	1.66
31	803	808	1319	1351	1.64	1.67
32	1085	1471	1546	1902	1.42	1.29

Conversion Process 4:

FRATAR the base-year peak period matrices from (2) using the factors established in (3). This yields the final future-year trip tables for the peak periods.

```
$FRATAR MODEL
```

```
$FILES
```

```
INPUT FILE=FRATIN, USER ID=$Adj_AM.trp$
```

```
OUTPUT FILE=FRATOUT, USER ID=$FRT_AM30.trp$
```

```
$HEADERS
```

```
2030 US 50, Dearborn Co, IN, Subarea Trip Table
```

```
FRATAR ODME-Adjusted AM Trip Table to 2030 value
```

```
$OPTIONS
```

```
print trip ends
```

\$PARAMETERS

number of iterations=10

\$DATA

FO	1	1	120
FO	2	1	122
FO	3	1	109
FO	4	1	117
FO	5	1	119
FO	6	1	128
FO	7	1	151
FO	8	1	119
FO	9	1	111
FO	10	1	105
FO	11	1	113
FO	12	1	108
FO	13	1	112
FO	14	1	222
FO	15	1	291
FO	16	1	122
FO	17	1	117
FO	18	1	124
FO	19	1	121
FO	20	1	137
FO	21	1	131
FO	22	1	121
FO	23	1	140
FO	24	1	140
FO	25	1	196
FO	26	1	129
FO	27	1	125
FO	28	1	165
FO	29	1	168
FO	30	1	176
FO	31	1	165
FO	32	1	98
FD	1	1	113
FD	2	1	128
FD	3	1	107
FD	4	1	137
FD	5	1	161
FD	6	1	124
FD	7	1	162
FD	8	1	121
FD	9	1	114
FD	10	1	100
FD	11	1	104
FD	12	1	118
FD	13	1	133
FD	14	1	460
FD	15	1	476
FD	16	1	132
FD	17	1	116
FD	18	1	127
FD	19	1	123
FD	20	1	156
FD	21	1	171
FD	22	1	108

```

FD      23 1      189
FD      24 1      161
FD      25 1      130
FD      26 1      129
FD      27 1      116
FD      28 1      162
FD      29 1      166
FD      30 1      164
FD      31 1      161
FD      32 1      156
$END TP FUNCTION
$FRATAR MODEL
$FILES
    INPUT FILE=FRATIN, USER ID=$Adj_PM.trp$
    OUTPUT FILE=FRATOUT, USER ID=$FRT_PM30.trp$
$HEADERS
    2030 US 50, Dearborn Co, IN, Subarea Trip Table
    FRATAR ODME-Adjusted PM Trip Table to 2030 value
$OPTIONS
    print trip ends
$PARAMETERS
    number of iterations=10
$DATA
    FO      1 1      115
    FO      2 1      126
    FO      3 1      108
    FO      4 1      118
    FO      5 1      138
    FO      6 1      124
    FO      7 1      158
    FO      8 1      116
    FO      9 1      113
    FO     10 1      101
    FO     11 1      110
    FO     12 1      110
    FO     13 1      120
    FO     14 1      328
    FO     15 1      434
    FO     16 1      123
    FO     17 1      115
    FO     18 1      123
    FO     19 1      127
    FO     20 1      145
    FO     21 1      149
    FO     22 1      116
    FO     23 1      191
    FO     24 1      148
    FO     25 1      135
    FO     26 1      113
    FO     27 1      125
    FO     28 1      165
    FO     29 1      170
    FO     30 1      170
    FO     31 1      164
    FO     32 1      142
    FD      1 1      118
    FD      2 1      127

```

FD	3	1	107
FD	4	1	114
FD	5	1	119
FD	6	1	121
FD	7	1	153
FD	8	1	104
FD	9	1	112
FD	10	1	100
FD	11	1	112
FD	12	1	110
FD	13	1	108
FD	14	1	267
FD	15	1	336
FD	16	1	126
FD	17	1	120
FD	18	1	122
FD	19	1	120
FD	20	1	138
FD	21	1	128
FD	22	1	109
FD	23	1	147
FD	24	1	150
FD	25	1	172
FD	26	1	100
FD	27	1	127
FD	28	1	165
FD	29	1	154
FD	30	1	166
FD	31	1	167
FD	32	1	129

\$END TP FUNCTION

Appendix V: Comparison of OKI RTDM and ISTM Output vs. Counts

	WEST END	EAST END	Count (2001)	OKI RTDM				ISTM		
				2000	Diff	Pct Diff		2000	Diff	Pct Diff
US 50	Dearborn-Ripley Line	SR 62 & Station Hollow Rd	7,680	6,109	-1,571	-20.46%		9,173	1,493	19.44%
	SR 62 & Station Hollow Rd	Cole Ln (IR-7)	10,310	11,248	938	9.10%		15,379	5,069	49.16%
	Cole Ln (IR-7)	Hill Top Dr. (Aurora)	15,360	14,787	-573	-3.73%		20,787	5,427	35.33%
	Hill Top Dr. (Aurora)	Exporting St (Aurora)	17,350	14,787	-2,563	-14.77%		25,476	8,126	46.84%
	Exporting St (Aurora)	SR 56 & SR 350 (Aurora)	21,070	14,787	-6,283	-29.82%		25,734	4,664	22.14%
	SR 56 & SR 350 (Aurora)	George St (Aurora)	27,990	40,854	12,864	45.96%		34,360	6,370	22.76%
	George St (Aurora)	SR 148 (Aurora)	37,350	42,155	4,805	12.86%		34,360	-2,990	-8.01%
	SR 148 (Aurora)	SR 48 (Lburg)	35,550	41,176	5,626	15.83%		33,523	-2,027	-5.70%
	SR 48 (Lburg)	Main St (Lburg)	41,930	51,851	9,921	23.66%		42,732	802	1.91%
	Main St (Lburg)	SR 1 & I-275 Ramps	34,950	40,548	5,598	16.02%		37,173	2,223	6.36%
	NORTH END	SOUTH END	Count (2001)	OKI RTDM				ISTM		
				2000	Diff	Pct Diff		2000	Diff	Pct Diff
SR 62	US 50	North St	3,410	6,397	2,987	87.60%		7,348	3,938	115.48%
SR 350	Exporting St	US 50	13,920	11,467	-2,453	-17.62%		4,530	-9,390	-67.46%
SR 56	US 50	Main & George Sts	6,910	13,557	6,647	96.19%		5,235	-1,675	-24.24%
SR 148	Manchester St	US 50	4,840	2,125	-2,715	-56.10%		3,961	-879	-18.16%
SR 48	Tower Rd	US 50	12,640	14,162	1,522	12.04%		9,434	-3,206	-25.36%
SR 1	Ridge Ave	US 50	13,970	24,304	10,334	73.97%		23,578	9,608	68.78%

Appendix VI: Alterations to Create Scenario Networks

Scenario 5 (SubNET 5.sce)

Changes from Base Scenario (SubNET.all)

Convert existing US 50 links to one-way Westbound:

- 1) 10569-10570
- 2) 10570-6421
- 3) 6421-6422
- 4) 6422-10604

Capacity = 2700 vph

Twoway = 0

All other attribute fields unchanged

Add Parallel Eastbound Links:

- 1) 10604-11817

Distance: 0.34 Mi
Time1: 0.48 min
Implied Speed: 42.5 mph
Capacity: 2700 vph
Twoway: 0

- 2) 11817-11818

Distance: 0.24 Mi
Time1: 0.36 min
Implied Speed: 40.0 mph
Capacity: 2700 vph
Twoway: 0

- 3) 11818-11816

Distance: 0.30 Mi
Time1: 0.44 min
Implied Speed: 40.9 mph
Capacity: 2700 vph
Twoway: 0

- 4) 11816-11815

Distance: 0.08 Mi
Time1: 0.12 min
Implied Speed: 40.0 mph
Capacity: 2700 vph
Twoway: 0

- 5) 11815-10569

Distance: 0.55 Mi
Time1: 0.80 min
Implied Speed: 41.2 mph
Capacity: 2700 vph
Twoway: 0

All other attributes identical to parallel link from opposing direction

Split and Reconnect Centroid Connectors:

- 1) Zone 8: Link 8-6422 -> 8-11817
- 2) Zone 9: Link 8-10570 -> 9-11816
- 3) Zone 10: Link 10-10570 -> 10-11815

No attribute fields, including time or distance, were changed for centroid connectors.

Add Crossover Connectors

1) 6422-11817

Distance: 0.05 Mi
Time1: 0.08 min
Implied Speed: 37.5 mph

2) 6421-11818

Distance: 0.06 Mi
Time1: 0.09 min
Implied Speed: 40.0 mph

3) 10570-11816

Distance: 0.05 Mi
Time1: 0.08 min
Implied Speed: 37.5 mph

4) 10570-11815

Distance: 0.06 Mi
Time1: 0.09 min
Implied Speed: 40.0 mph

All crossover connectors:

Capacity: 1160 vph
Linkgrp1: 3
Linkgrp2: 1
Linkgrp3: 4
Asgngrp: 2
User: 0
Cost: 0
Toway: 1

Scenario 5b (SubNET5b.sce):

Changes relative to Scenario 5:

Increase Capacity on US 50 One-way Couplet to 3500 vph

- 1) 10569-10570
- 2) 10570-6421
- 3) 6421-6422
- 4) 6422-10604
- 5) 10604-11817
- 6) 11817-11818
- 7) 11818-11816
- 8) 11816-11815
- 9) 11815-10569

Capacity = 3500 vph

All other attribute fields unchanged

Scenario 5c (SubNET5c.sce):*Changes relative to Scenario 5:***Increase Capacity on US 50 One-way Couplet to 5000 vph**

- 1) 10569-10570
- 2) 10570-6421
- 3) 6421-6422
- 4) 6422-10604
- 5) 10604-11817
- 6) 11817-11818
- 7) 11818-11816
- 8) 11816-11815
- 9) 11815-10569

Capacity = 5000 vph

All other attribute fields unchanged

Improve Capacity on US 50 between One-way Couplet and SR 1 / I-275

- 1) 6396-10567
- 2) 10567-10568
- 3) 10568-10569

Capacity = 3500 vph/dir

All other attribute fields unchanged

Improve Capacity on SR 1 between Ridge Ave and US 50

10599-6396

Capacity = 2700 vph/dir

All other attribute fields unchanged

Scenario 8 (SubNET_8.sce):*Changes from Base Scenario (SubNET.all)***Add two new links:**

- 1) Add two-way link 10593-10598
Distance 1.635 Mi
Time1 3.89 min
Implied speed 42 mph
Capacity 1350 vph each direction
- 2) Add two-way link 10601-10604
Distance: 0.17 Mi
Time1 0.24 min
Implied speed 42 mph
Capacity 1350 vph each direction

Scenario 8b (SubNET8b.sce):*Changes relative to Scenario 8:***Convert all links on bypass alignment to 5400 vph, 60 mph**

1)10601-10604:
Time1: 0.19 min
Capacity: 2700 vph
Other fields unchanged

2)10601-10602:
Time1: 0.58 min
Capacity: 2700 vph
Other fields unchanged

3)7841-10602:
Time1: 0.43 min
Capacity: 2700 vph
Other fields unchanged

4)6423-7841:
Time1: 0.39 min
Capacity: 2700 vph
Other fields unchanged

5)6423-10594:
Time1: 0.51 min
Capacity: 2700 vph
Other fields unchanged

6)10593-10594:
Time1: 0.44 min
Capacity: 2700 vph
Other fields unchanged

7)10593-10598:
Time1: 1.64 min
Capacity: 2700 vph
Other fields unchanged

8)10598-10599:
Time1: 0.63 min
Capacity: 2700 vph
Other fields unchanged

9)6396-10599:
Time1: 0.32 min
Capacity: 2700 vph
Other fields unchanged

**APPENDIX B
AGENCY COMMENTS AND
AGENCY MEETING MINUTES**

MEMORANDUM

- | |
|--|
| <input type="checkbox"/> Information Only |
| <input type="checkbox"/> Project Specific |
| <input type="checkbox"/> Policy Memo - File With |

TO: US 50 Project Management Team
FROM: Bruce A. Rape
DATE: May 4, 2007; Revised June 7, 2007
RE: US 50 Dearborn County EA/Corridor Study; Agency Meeting Minutes

An interagency meeting was held on April 30, 2007 at the Adult Center in Lawrenceburg, IN. An option to teleconference into the meeting was also provided to each agency.

Attendees:

Larry Heil – FHWA
Bruce Rape – Strand
Scott Roush – Strand
Leslie Trobaugh – Strand
Jason Falls – Doe Anderson
Mary Jackman – INDOT
John Carr – DNR DHPA
Dr. Rick Jones – DNR DHPA
Bob Williams – INDOT

Via Teleconference:

Jeff Held – Strand
Ben Lawrence – INDOT
Loni Hrynk – INDOT
Frank Baukert – INDOT
Steve Smith – INDOT
Chris Koeppel – INDOT
Virginia Laszewski – EPA Region 5

The meeting began with Larry Heil providing a summary of the purpose, goals and process of the Streamlined EIS Procedures. He then summarized the recommendations of the US 50 Dearborn County EA/Corridor Study by corridor segment. The floor was then opened for questions and discussion.

Virginia Laszewski opened with a question regarding why the study was broken into segments and separate projects when they could be advanced with one larger construction project and advanced with an EIS study.

Larry responded that there were distinct segments of the corridor and unique solutions to each which render separating the projects for individual evaluation more effective.

Frank Baukert added that the most significant need of the project was the bottleneck in Lawrenceburg, and that some of the improvements could possibly be advanced in the short term, while others were more major, long-term commitments.

Virginia then had a question regarding the Tanner's Creek Bridge mentioned as a necessity, but not included as a project of independent utility in the report.

Frank reported that this was a locally committed project that is to be constructed and is currently proceeding.

Virginia then raised concerns regarding historical impacts from the bridge project and inquired into the opinion of the SHPO regarding this project.

Larry indicated the local project was proceeding using local gambling funds. For the purpose of this study it is necessary to assume it will be constructed.

Frank added that the project was viewed as a local necessity, which was why the funds were made available locally. INDOT has programmed this project so funds are available. Some demolition was planned for the near future.

Virginia then questioned whether there were any environmental justice issues, which was answered in the negative by Strand personnel.

Larry reiterated that no projects from this study are programmed yet, and if the bridge is not constructed, then the selected alternate would have to add another bridge. Also, once a project is ranked then more in-depth environmental studies will be completed.

John Carr had a procedural comment regarding the Tanner's Creek Bridge project. He indicated that by using local gambling funds, the City may not have to address historical property issues, since no federal funds were being used. He mentioned that one building was already demolished.

Chris Koeppel indicated American Structure Point was the consultant for the Tanner's Creek Bridge project, and that no buildings had been destroyed yet, and that the City and Consultant were aware of Section 106 issues.

John Carr spoke again regarding historic impacts. He mentioned that he and Dr. Jones walked the Newtown District. He suggested that the Newtown Historic District surveyed in the interim report might have a strip across its middle, along the north side of US 50/Eads Parkway that may no longer contain contributing buildings. He suggested there now may only be and eligible Historic District on the south side of US 50, or that there might be two, one southward from US 50 and another northward from a line half a block, or a block north of US 50

Mr. Carr then questioned whether the discarded TSM Concept 3 (reversible lanes through Lawrenceburg) satisfied long-term purpose and need. Since this type of project would not require as much right of way, historic impacts would be minimized. He asked whether additional consideration could be given to this option.

Scott Roush indicated that INDOT and OKI had tried this concept in Indianapolis and Cincinnati, and neither would recommend this alternative from an engineering perspective. Scott indicated the final report will include additional information regarding why this alternate was discarded. Jeff Held indicated this alternative did not fully provide acceptable 2030 LOS.

Larry Heil indicated that the report should clearly state whether TSM Concept 3 satisfied purpose and need. If it did, then this alternate should be carried forward.

The bypass or connector project which has been a locally developed project was also discussed. John Carr stated that from a historic perspective the bypass alternatives were the most attractive. Larry Heil reiterated that these projects (Alternates 8 and 9) would not remove enough traffic from US 50 through Lawrenceburg, based on traffic modeling performed by Wilbur Smith Associates, and as such, did not satisfy purpose and need for the project. Scott Roush stated that the bypass/connector alternatives could also have some significant environmental impacts, but that the connector project may still be advanced as a local project.

John Carr asked if the modeling took into account signage and if traffic models showed different numbers if the new connector were signed as the US 50 instead of a local connector road. Scott Roush indicated the connector was studied purely as a local road, not as a new US 50. Jeff Held also indicated signage was not anticipated to make a significant impact on quantity of traffic, especially since most of the traffic was local and that the quickest route would be sought by all such local travelers, regardless of signage.

John Carr also inquired into the new Ohio River bridge project, and whether this alternative, if selected, would be designated as US 50, and similarly, whether Alternates 8 and 9 would be designated US 50, in order to draw additional traffic from Eads Parkway through Lawrenceburg. His comment was that through traffic would most likely follow US 50 around Lawrenceburg if any of these alternates were designated as US 50, rather than travel through downtown Lawrenceburg. Jeff Held's response was that the redesignation of US 50 was a matter that would be decided later.

A brief discussion was then conducted regarding the next steps of this project, including programming, etc. Virginia inquired whether the agencies would receive a final copy of the EA/Corridor Study document. Strand personnel indicated that a final report would be prepared and forwarded to INDOT near the end of May.

As no other questions were raised, the meeting was adjourned.



Indiana Department of Environmental Management

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

100 North Senate Avenue
Indianapolis, Indiana 46206

Thomas W. Easterly
Commissioner

(317) 232-8603
800) 451-6027
www.IN.gov/idem

INDOT
Steve Smith, Project Manager
100 North Senate Ave.
Indianapolis, IN 46201

Strand Associates, Inc.
Leslie Trobaugh
629 Washington Street
Columbus, IN 47201

Sunday, January 28, 2007

Dear Grant Administrator or Other Finance Approval Authority:

RE: US 50 Corridor study from Dillsboro to I-275 interchange in Lawrenceburg. Study is to evaluate corridor responsiveness to growing traffic levels & to develop alternatives to address needs of corridor.

The Indiana Department of Environmental Management (IDEM) is aware that many local government or not-for-profit entities are seeking grant monies, a bond issuance, or another public funding mechanism to cover some portion of the cost of a public works, infrastructure, or community development project. IDEM also is aware that in order to be eligible for such funding assistance, applicants are required to first evaluate the potential impacts that their particular project may have on the environment. In order to assist applicants seeking such financial assistance and to ensure that such projects do not have an adverse impact on the environment, IDEM has prepared the following list of environmental issues that each applicant must consider in order to minimize environmental impacts in compliance with all relevant state laws.

IDEM recommends that each applicant consider the following issues when moving forward with their project. IDEM also requests that, in addition to submitting the information requested above, each applicant also sign the attached certification, attesting to the fact that they have read the letter in its entirety, agree to abide by the recommendations of the letter, and to apply for any permits required from IDEM for the completion of their project.

IDEM recommends that any person(s) intending to complete a public works, infrastructure, or community development project using any public funding consider each of the following applicable recommendations and requirements:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>, and then click on "Information" from the menu on the right-hand side of that page). Their "Consultant List" is the forth entry down on the "Information" page. Please note that the

USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at www.in.gov/idem/water/planbr/401/reglinks.html. IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality. To learn more about the water quality certification program, visit: <http://www.in.gov/idem/water/planbr/401/401overview.html>.
3. If the USACE determines that a wetland or other body of water is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana. A state isolated wetland permit from IDEM's Office of Water Quality is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, visit <http://www.in.gov/idem/water/planbr/401/isowetlands.html>. You also may contact the Office of Water Quality at 317-233-8488.
4. If your project will impact more than 0.5 acres of wetland, stream relocation, or other large-scale alterations to bodies of water such as the creation of a dam or a water diversion, you should seek additional input from the Office of Water Quality, Wetlands staff at 317-233-8488.
5. Work within the one-hundred year floodway of a given body of water is regulated by the Department of Natural Resources, Division of Water. Contact this agency at 317-232-4160 for further information.
6. The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.
7. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality - Permits Branch 317-233-1864 regarding the need for a Rule 5 Storm Water Run-off Permit. Visit the following Web pages:
 - o <http://www.in.gov/idem/guides/permit/water/stormwaterconstruction.html>
 - o <http://www.in.gov/idem/water/npdes/permits/wetwthr/storm/rule5.html>
 - o <http://www.in.gov/idem/water/npdes/permits/wetwthr/storm/rule5defs.html#compliance>

To obtain, and operate under, a Rule 5 permit, you will first need to develop a construction plan (<http://www.in.gov/idem/guides/permit/water/comply>), as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150.pdf>, pages 16 through 19). Before you may apply for a Rule 5 permit, or begin construction, you must submit your construction plan to your county soil and water conservation district (SWCD) (<http://www.in.gov/dnr/soilcons/contacts/map.html>). Upon receipt of the construction plan, personnel of the SWCD or Division of Soil Conservation will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient, you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI). Once construction begins, staff of the SWCD or Division of Soil Conservation will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 150 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for construction plan review and also for storm water construction run-off NOI review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Web site at <http://www.in.gov/idem/water/npdes/permits/wetwthr/storm/rule5.html>. If your project is located in an IDEM approved MS4 area, please contact that MS4 program about meeting their storm water requirements, rather than seeking to operate under a Rule 5 permit from IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize soil erosion. The use of straw bale barriers, silt fencing, earthen berms, or other appropriate techniques around disturbed areas are recommended to prevent soil from leaving the construction site. Information and assistance regarding control of construction-related soil erosion are available from the soil and water conservation district (SWCD) offices in each county. To locate the appropriate SWCD office, visit <http://www.in.gov/dnr/soilcons/contacts/map.html>.

8. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317-232-4080) for additional project input.
9. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits, (www.in.gov/idem/guides/permit/water/drinkingwater.html)
10. For projects involving effluent discharges to waters of the State of Indiana, contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
11. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits at www.in.gov/idem/guides/permit/water/wwwconstructionpermits.html.

AIR QUALITY

The above-noted project (see page 1) should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (www.in.gov/idem/guides/permit/air/openburning.html#maintenance) under specific conditions (www.in.gov/idem/guides/permit/air/openburning.html#conditionsallowed). You also can seek an open burning variance from IDEM at www.in.gov/idem/guides/permit/air/openburning.html#variances.

IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on-site. You must register with IDEM if more than 2,000 pounds is to be composted; contact 317-232-0066. The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) on-site, although burying large quantities of such material can lead to subsidence problems.

2. Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized (www.in.gov/idem/guides/permit/air/fugitivedust.html).

If construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for three to five years, precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for three to five years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at 317-233-7272.

3. The U.S. EPA and the U.S. Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. For a county-by-county map of predicted radon levels in Indiana, visit <http://www.in.gov/idem/radon/health.html>.

The U.S. EPA further recommends that all homes and apartments (within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L or higher, then U.S. EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L or higher, then U.S. EPA recommends the installation of radon-reduction measures. For a list of qualified radon testers and radon mitigation (or reduction) specialists, visit http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf. Also, is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels. To learn more about radon, radon risks, and ways to reduce exposure, visit <http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>, <http://www.in.gov/idem/radon/>, or <http://www.epa.gov/iaq/radon/index.html>.

4. With respect to asbestos removal, all facilities slated for renovation or demolition (except residential buildings that have four (4) or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

In all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at www.in.gov/icpr/webfile/formsdiv/44593.pdf.

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. Billings will occur on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: www.in.gov/idem/guides/permit/waste/asbestosremoval.html.

5. With respect to lead-based paint removal, IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification

requirements. For more information about lead-based paint removal, visit www.in.gov/idem/guides/permit/waste/leadabatement.html.

6. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months of April through October. See 326 IAC 8-5-2, Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>).
7. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (www.ai.org/legislative/iac/t03260/a00020.pdf). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
8. For more information on air permits, visit www.in.gov/idem/guides/permit/air/index.html, or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or oamprod@idem.in.gov.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/guides/permit/waste/index.html>.
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If Polychlorinated Biphenyls (PCBs) are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes. (Asbestos removal is addressed above, under Air Quality.)
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317-308-3039 (<http://www.in.gov/idem/guides/permit/waste/ust.html>).

FINAL REMARKS

Should the applicant need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that they notify all adjoining property owners and/or occupants within ten days of your submittal of each permit application. Applicants seeking multiple permits, may still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period. For additional information and forms, visit www.in.gov/idem/guides/permit/landdevelopment/notification.html.

Please note that this letter does not constitute a permit, license, endorsement, or any other form of approval on the part of either the Indiana Department of Environmental Management or any other Indiana state agency.

Should you have any questions relating to the content or recommendations of this letter, or if you have additional questions about whether a more complete environmental review of your project should be conducted, please feel free to contact Eric Levenhagen at (317) 234-3386, elevenha@idem.IN.gov.

Sincerely,



Thomas W. Easterly
Commissioner

Signature(s) of the Applicant

I acknowledge that I am seeking grant monies, a bond issuance, or other public funding mechanism to cover some portion of the cost of the public works, infrastructure, or community development project as described herein, which I am working (possibly with others) to complete.

Project Description

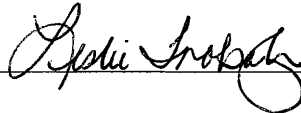
US 50 Corridor study from Dillsboro to I-275 interchange in Lawrenceburg. Study is to evaluate corridor responsiveness to growing traffic levels & to develop alternatives to address needs of corridor.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environmental Management that appears directly above. In addition, I understand that in order to complete the project in which I am interested, with a minimum impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Dated Signature of the Public Owner
Contact/Responsible Elected Official _____

Steve Smith, Project Manager

Dated Signature of the Project
Planner/Consultant Contact Person _____



Leslie Trobaugh

From: <Michael_Litwin@fws.gov>
To: <leslie.trobaugh@strand.com>
Date: 7/3/06 12:40PM
Subject: US 50 corridor study in Dearborn County

Leslie

Because this phase of coordination focuses on existing facilities and traffic patterns our comments are minimal, so to save time I am submitting them in email format. Our comments are as follows:

General Comments

The study should develop an inventory of sensitive environmental areas and features within the study area, and develop route alternatives to avoid or minimize impact to those areas. An example of sensitive areas is the extensive and heavily dissected forested, with shallow soils and near-surface aquifers in some areas, north and west of Lawrenceburg.

Specific Comments

1. The FWS has reviewed the proposed Lawrenceburg Bypass project referred to on 4-3. A copy of our most recent comment letter (original date February 8, 2005) is attached below.
2. Page 6-1 briefly addresses environmental features in the study area. The reference is limited to floodplains and wetlands, however it should also include streams and the aforementioned forested areas.

Endangered Species

The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and running buffalo clover (*Trifolium stoloniferum*), and federally threatened bald eagle (*Haliaeetus leucocephalus*). The Indiana bat and running buffalo clover are known to occur within the study area.

(See attached file: Lawrenceburg-Greendale connector.doc)

Michael Litwin
US Fish and Wildlife Service
Bloomington, IN 47403
(812) 334-4261 ext. 205

This message was scanned by U.S. Fish and Wildlife, Region 3 by Symantec Anti-Virus. Warning: Although we have taken reasonable precautions to ensure no viruses are present in this email, we cannot accept responsibility for any loss or damage arising from the use of this email or

attachments. Recipients should use common sense and IT "Best Practices" before opening any attachment.

CC: <Laszewski.Virginia@epa.gov>

*This is a copy of the Early Coord. response
on the Connector project. Included in
the E.C. response for Corridor Study
as ^{some of} area overlaps.*

July 3, 2006

Ms. Leslie Trobaugh
Strand Associates - SIECO Division
629 Washington Street, P.O. Box 407
Columbus, Indiana 47202

Project No.: STP-9415 Des. 9485960
Road(s): Lawrenceburg-Greendale Connector (new route)
Waterway: Tanners Creek and tributaries
Work Type: Road construction
County(ies): Dearborn

Dear Ms. Trobaugh:

This responds to your letter dated September 17, 2004 requesting U.S. Fish and Wildlife Service (FWS) comments on the aforementioned project. As discussed in several telephone conversations and e-mails, our response was delayed while awaiting new design information from your office. The following comments are based upon information received in your original letter, the additional design information received on January 19, 2005, and the meeting at our Bloomington Field Office on February 2, 2005.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The proposed project consists of a new road connecting SR 48 on the west side of Lawrenceburg with SR 1 east of Greendale. The current proposal includes 3 route alternatives on the west end and 4 alternatives on the east end with a central component common to all alternatives. The preliminary designs indicate total project lengths ranging from 2.25 to 3.37 miles, total right-of-way land requirements ranging from 108 to 149 acres, and right-of-way width requirements ranging from 150 -200 feet minimum to 750 feet maximum.

Your letter does not provide detailed information regarding impacts of the project (e.g. forest acreage, stream crossing impacts, wetlands), therefore our comments should be regarded as preliminary. Additional coordination should occur as project development proceeds.

A biologist from the FWS' Bloomington Field Office inspected the project on January 12, 2005. Our inspection focused on areas of greatest concern for wildlife habitat, and was somewhat limited by access along road and power line easements and by flooding, so we did not inspect all route alternatives. This office reviewed and inspected the previous Lawrenceburg Bypass proposal in the mid/late 1990's, so we are somewhat familiar with the general area of Alternatives 2D, 2E, 2F and the proposed Tanners Creek crossing.

Western Route Alternatives

We inspected the portion of Alt. 2B where it crosses the forested tributary of Tanners Creek near the county road along the north section line of Section 4. The drainageway has a moderately steep slope and is dominated by mixed-age hardwood forest. We observed 4 oak species (red, white, chinquapin and chestnut), hickories, walnut, white ash, Ohio buckeye, red elm, American elm and honey locust, including several large trees and snags (Photo 1). The headwater stream channel is small but contains good habitat quality and is probably used by several small species of fish and aquatic invertebrates during spring high flows.



Photo 1 Headwater stream corridor in area to be crossed by Alternative 2B.

Impacts in this area would consist of moderate loss and fragmentation of stream habitat, riparian forest habitat for migratory birds and other forest wildlife, and potential for downstream impacts from soil runoff and alterations in stream hydrology. We did not inspect the Alt. 2A crossing of this drainageway or either crossing of the forested drainageway further north, but we would expect the habitat to be similar and the impacts to be greater at all those locations.

Central Portion of Route

We inspected the proposed route which follows the power line corridor from Pribble Road downhill to the Tanners Creek floodplain. This route section is essentially the same for Alts. 2A, 2B, 2D, 2E, 2F, and 2G, and most of it overlaps Alt. 2C. Our inspection began at Pribble Road and followed the power line easement downhill most of the way to the floodplain. Near Pribble Road the proposed road corridor lies in a narrow forested corridor between the power line easement, which lies on the lower slopes of a major drainageway, and a pasture at higher elevations. The forest in this area is dominated by young growth and is heavily infested with bush honeysuckle, which is an exotic, invasive species. As the route proceeds downhill toward the floodplain the adjacent forest becomes wider and of higher quality. Approximately half way to the floodplain the power line easement and proposed road corridor enter what is essentially a continuous forest block ranging from ½ mile to 1 mile wide and several miles in length, bordered by US 50 Highway to the south, SR 1 to the north and Tanners Creek to the east. The forest in this part of the study area is of very high quality, with many large trees, and the understory is dominated by native vegetation with no honeysuckle apparent (Photo 2).



Photo 2 General vicinity of proposed road in extensively forested area, looking toward a ravine which would have to be crossed. Tanners Creek floodplain is beyond the ravine.

The forest is dissected by several deep ravines with steep slopes, which would require extensive cut and fill to cross at-grade. Alt. 2C enters the shared corridor by crossing the main drainageway at another area with very steep slopes. Forest loss and fragmentation in this area would be large and significant for all alternatives, due to both the location and the steep, rugged topography which would require a lot of cut and fill.

Impacts in this area would consist of substantial loss of forest habitat for migratory birds as well as upland game species, non-game mammals, reptiles, and forest amphibians. The road corridor will create a barrier and result in road kill mortality for all non-flying species, especially slow-moving species such as reptiles and amphibians. In addition to loss of forest and creation of a barrier, large openings provide an avenue for invasive species and for brown-headed cowbirds and bird nest predators, both of which reduce nesting success of migratory birds. There is also a large potential for soil erosion, loss of slope stability and associated soil runoff to drainageways and Tanners Creek.

Eastern Route Alternatives

The last area which we inspected was the proposed crossing of Tanners Creek on Alternative 2G. All of the area between the railroad tracks and the stream channel (which is adjacent to SR 1) is forested, mostly consisting of floodplain forest. We were not able to inspect this area on foot because it was extensively flooded as a result of recent rains (Photo 3).



Photo 3 Tanners Creek floodplain at approximate location of Alternative 2G crossing

This route alternative would obviously require a great deal of tree clearing and forest fragmentation due to the extensive amount of fill that would be needed. Even if the entire area were bridged (approximately ½ mile), tree clearing would still be required beneath the bridge. Since wildlife impacts for Alternatives 2 D-F would be so much less, the FWS is opposed to Alternative 2G.

Site-Specific Recommendations

General

We continue to suggest an additional Alternative, as we did in our review of the project, continuing essentially due north from the Pribble Road/power line intersection to SR 1, and improving SR 1 from that point to Greendale. This would eliminate the central project component where most of the significant impacts would occur.

Western Alternatives and Central Portion of Route

1. Alternative 2C (Pribble Road) has less overall impacts on wildlife habitat and less potential for erosion and intrusion on steel slopes because it avoids the forested tributaries discussed previously. However, due to the interconnection between all west Alternatives and the shared central portion where the greatest impacts will occur, we recommend a revised route for Alternative 2C and the central route, as shown in the attached Figure 1. Our proposed route is shifted to the north at the upper elevations of the power line corridor, in the cleared field rather than on the forested slope, then shifts to the south in the area of extensive, high-quality forest, to be as close as possible to the power line corridor. This will reduce the direct impacts of the highway at higher elevations, especially where Alternative 2C crosses a steep, forested slope to join the other alternatives. It will not reduce direct impacts in the lower elevations but will reduce fragmentation by creating essentially a single, wide linear opening rather than 2 linear openings with a narrow forest strip between them. The road corridor should be able to overlap somewhat with the power line corridor since it would not compromise access to or maintenance of the corridor. (Note: In our February 2 meeting you stated that the current proposal for the entire power line corridor is to locate the road as close to the power line as possible).

2. All steep drainageway ravines in the central portion of the project (as shown in Photo 2) should be bridged rather than filled. This will greatly reduce the required right-of-way and associated tree clearing.

3. All small drainageways not addressed in recommendation #2 should be crossed with 3-sided culverts rather than pipes or closed culverts.

Eastern Alternatives

Our preferred route on the east end is Alternative 2E. As previously stated we are opposed to selection of Alternative 2G.

General Mitigation Recommendations

1. Post DO NOT DISTURB signs at the construction zone boundaries in forested areas and do not clear trees or understory vegetation outside the boundaries.
2. Restrict below low-water work in Tanners Creek and other bridged streams to placement of piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap.
3. Restrict stream channel work and vegetation clearing to the minimum necessary for construction of crossings.
4. Minimize the extent of artificial bank stabilization.
5. If riprap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
6. Implement temporary erosion and siltation control devices such as placement of riprap check dams in drainage ways and ditches, covering exposed areas with erosion control materials, and grading slopes to retain runoff in basins. Additional erosion control measures will be necessary in areas with steep slopes.
7. Revegetate all disturbed soil areas immediately upon project completion, using native trees and shrubs in forested areas and riparian areas.
8. Avoid channel work in Tanners Creek and the western tributaries during the fish spawning season (April 1 through June 30).

Endangered Species

The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and running buffalo clover (*Trifolium stoloniferum*), and federally threatened bald eagle (*Haliaeetus leucocephalus*). There are currently no eagle nests near the project area.

During the winter, Indiana bats hibernate in caves. In spring, they migrate variable distances to upland and bottomland forested areas where they spend the summer roosting, foraging, and bearing their young (only one pup/female). Upon arriving at their summer habitat, up to a hundred or more adult females form maternity colonies and raise their pups beneath the exfoliating bark of trees. Suitable roost trees are those which contain exfoliating bark with sufficient space to shelter bats, including dead and senescent trees, shagbark hickories and other species which develop loose bark as large, old specimens. Each maternity colony uses at least one 'primary' roost tree that is used by a majority of bats the majority of the time and up to a dozen or more 'alternate' roost trees, which are used less frequently by fewer bats. Primary roost trees are frequently situated along forest edges or in forest openings such that the trees receive maximum solar radiation throughout the day (i.e., to provide a thermal advantage to the developing young) and are often located near drainageways in relatively undeveloped areas. Because roost trees are an ephemeral resource and the bats are very loyal (i.e., philopatric) to their roosting and foraging areas from year to year, Indiana bats require an adequate and continual supply of suitable roost trees growing and dying in the landscapes surrounding their maternity colonies.

There is suitable summer habitat for this species present throughout the area surrounding the project site. A bat survey conducted in 1998 for the previous Lawrenceburg Bypass project found a juvenile female Indiana bat at a site on Tanners Creek. The presence of a juvenile indicates that a maternity colony/roost was present nearby, but because a radio-tracking study was not conducted at that time, the locations of maternity roosts could not be determined. Based upon typical foraging ranges of juveniles in late summer, the roost could be in any forested area of any route alternative currently under consideration.

Since the surrounding landscape is extensively forested, the current alternative proposals, depending upon final design, may not eliminate enough summer habitat to adversely affect members of the Indiana bat colony that we assume still resides in the area. However, we have insufficient information for making such a determination because no roost trees were located during the 1998 bat survey and the bats' roosting and foraging areas may have shifted over time. If construction of the proposed road happened to eliminate a primary and/or alternate roost trees then even clearing during the non-occupancy season may result in adverse effects and incidental taking of Indiana bats, by reducing the reproductive potential of the affected colony members. To resolve this issue, we recommend that additional mist net surveys be conducted and that radio transmitters be placed on any Indiana bats captured, to determine the precise location of their roost trees relative to the proposed alignments. Surveys of summer habitat within proposed road corridors to evaluate the abundance and distribution of suitable roost trees would also be useful in assessing potential impacts and possibly modifying the project to avoid areas of suitable roost tree concentrations. Areas of concern for surveys are the large forest block associated with Tanners Creek near the power line corridor (all route alternatives), and the forested drainageways near the west end of the project (Alternate 2A only).

If no additional bat survey work is performed, or if additional mist net surveys and radio-telemetry surveys determine that the primary roost tree or concentrations of occupied roost trees will be lost or significantly disturbed by the selected alignment, the project as currently proposed may adversely affect the Indiana bat. The FWS would need additional information to make a further determination as to whether a take will occur, which would result in the need for formal consultation under Section 7 of the Endangered Species Act. Additional information needed would include estimates of the right-of-way widths in the areas of concern, estimates of the amount and quality of forest which would be lost, and the likelihood of additional losses from induced, secondary development.

If additional surveys determine that the occupied roost trees are not in the area that would be affected by the project, or if no Indiana bats are found in properly conducted surveys, the probability of adverse effects on the listed species would be much lower. In that case, a taking could be avoided by implementing best available design and construction measures to minimize habitat loss, adhering to seasonal restrictions on tree removal (no removal of trees in areas of suitable habitat between April 15 and September 15), and including design measures to minimize the extent of induced development.

Bat surveys must be conducted in accordance with FWS survey protocols, by a biologist with sufficient expertise in bat biology to obtain state and federal permits. It would also be necessary to work with the FWS's Bloomington Field Office to determine appropriate survey sites.

There is a recent record of running buffalo clover in a tributary drainageway approximately ½ mile upstream from the west end of Alternatives 2 D-G. The Endangered Species Act (ESA) does not prohibit taking of listed plants on non-federal land, but Section 7 (a) (1) of the ESA directs all federal agencies to utilize their authorities to further the purpose of the Act. We recommend a survey for this species in appropriate habitats at the east end of the study area, during the appropriate growing season. Since running buffalo clover occurs in small, localized populations, if specimens of running buffalo clover are found they could probably be avoided by minor route adjustments.

This endangered species information is provided for technical assistance only, and does not fulfill the requirements of Section 7 of the Endangered Species Act. Additional informal consultation will be necessary until a determination has been made regarding adverse effects on listed species.

A permit under Section 404 of the Clean Water Act may be needed for the proposed project. Our recommendations to the U.S. Army Corps of engineers for permit conditions would be consistent with our comments here.

We appreciate the opportunity to comment at this early stage of project planning. As project development continues, please recoordinate with our office. If you have any questions about our recommendations, please call Mike Litwin at (812) 334-4261 (Ext. 205).

Sincerely yours,

Scott E. Pruitt
Field Supervisor

cc: Federal Highway Administration, Indianapolis, IN
Andrew Pelloso, IDEM, Water Quality Standards Section, Indianapolis, IN
Christie Kiefer, Indiana Division of Fish and Wildlife, Indianapolis, IN

ES: MLitwin/332-4261/July 3, 2006

**State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Water**

Early Coordination/Environmental Assessment

DNR #: ER-12141 **Request Received:** May 4, 2006

Requestor: Strand Associates, Inc
Leslie Trobaugh
629 Washington Street
Columbus, IN 47201

Project: US 50 Corridor Planning and Environmental Assessment Study

County/Site info: Dearborn

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

Regulatory Assessment: This proposal will require the formal approval of our agency for construction in a floodway, pursuant to the Flood Control Act (IC 14-28-1). Please submit a copy of this letter with the permit application.

Natural Heritage Database: The Natural Heritage Program's data have been checked.
The Division of Nature Preserves has no comment for this project at this time.

Fish & Wildlife Comments: Significant areas of wetlands and non-wetland floodplain habitat associated with the Ohio River and its tributaries could be negatively affected by any roadway improvements south of US50 between Aurora and I-275. Steep and densely forested hillsides are located immediately north of US50 along most of this area. New terrain roadway improvements could cause significant environmental harm and should be avoided.

Bridges should be designed to provide a minimum 8 feet tall by 24 feet wide opening that does not include the size of the opening over the channel. This opening under the bridge with unsubmerged dry land is essential for wildlife passage. If riprap is planned under the bridge, only dry land unarmored with riprap is considered in the opening dimensions. Considerations can be made if alternative armoring materials are used.

Additional environmental review comments will be made as more specific project information is made available.

Contact Staff: Christie L. Stanifer, Environ. Coordinator, Environmental Unit
Our agency appreciates this opportunity to be of service. Please do not hesitate to contact the above staff member at (317) 232-4160 or 1-877-928-3755 (toll free) if we can be of further assistance.

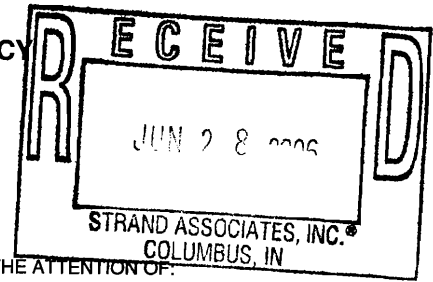

Jon W. Eggen
Environmental Supervisor
Division of Fish and Wildlife

Date: July 6, 2006



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 23 2006



REPLY TO THE ATTENTION OF:

B-19J

Leslie A. Trobaugh
Strand Associates, Inc
629 Washington Street
Columbus, IN 47201

Re: FHWA/INDOT Early Coordination Point Package for the Corridor Planning and Environmental Assessment Study (EA/Corridor Study) for US 50 from the Town of Dillsboro, Indiana to the US 50/I-275 Intersection east of Lawrenceburg, Indiana.

Dear Ms. Trobaugh:

The National Environmental Policy Act Implementation Section (NIS) has received your May 2, 2006, letter addressed to Ms. Virginia Laszewski, with the following enclosures: (1) Draft Copy – Purpose and Need (dated March 2006), (2) Draft – US 50 Existing Conditions Report (dated April 2006), and (3) a post card to fill in and return to your office requesting to know whether or not U.S. EPA will participate in the above referenced study.

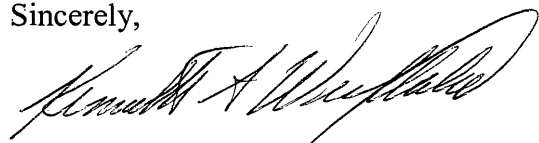
After receiving your letter, Ms. Laszewski called you on May 10, 2006, to get clarification on the above referenced study and additional information. We now understand that Steve Smith, INDOT and Larry Heil, FHWA are the project managers for this US 50 EA/Corridor Study. After speaking with you, Ms. Laszewski filled out and returned your post card on 05/10/06. She amended the post card to state that our agency would be willing to participate in the study as staff time allows. She also made arrangements to attend the June 13, 2006, Interagency Review Meeting mentioned in your letter. On June 8, 2006, after making several calls she was informed that the June 8th meeting was postponed until an unspecified future date.

U.S. EPA's understanding of the FHWA/INDOT streamlining process for EA/Corridor Studies is that an Interagency Review Meeting is held to allow the agencies to ask questions, get answers and provide verbal comment on the particular EA/Corridor Coordination Point Package of information (Package) currently under consideration. An Interagency Review Meeting is usually held two weeks in advance of the deadline for written comments on a Package.

At this time we will not be submitting written comments on the Package that accompanied your May 2nd letter. We will wait to comment after we have had an opportunity to attend the future Interagency Review Meeting to discuss the current or perhaps revised/amended versions of the Coordination Point Package draft documents.

We appreciate your early coordination efforts. If you have any questions or wish to discuss please contact Ms. Virginia Laszewski, at 312/88-7501 or email her at laszewski.virginia@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth A. Westlake". The signature is fluid and cursive, with the first name "Kenneth" being more prominent.

Kenneth A. Westlake, Chief
NEPA Implementation Section

Cc: Steve Smith, INDOT
Larry Heil, FHWA



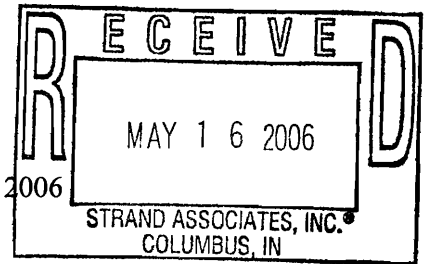
Indiana Department of Natural Resources

Mitchell E. Daniels, Jr., Governor
Kyle J. Hupfer, Director

Environmental Unit
Division of Water
402 W. Washington Street, Rm. W264
Indianapolis, IN 46204-2641

Ms. Leslie A. Trobaugh
Strand Associates, Inc.
629 Washington Street
Columbus, Indiana 47201

May 12, 2006



RE: US 50 Corridor Planning and Environmental Assessment Study ~ DNR # CTS-ER-12141

Dear Ms. Trobaugh:

This is an informational letter in response to your request for an Environmental Review received at the Division of Water on May 4, 2006 for the above project in Dearborn County. We would like you to know that the review is in process. Please refer to the above DNR # when calling and on all future correspondence regarding this project.

If you have any questions or comments, please contact me at (317) 232-4160 or toll free at (877) 928-3755. You may also email me at aoliger@dnr.IN.gov or contact Christie Stanifer, Environmental Coordinator, at the number above.

Sincerely,

Alysson C. Oliger
Environmental Secretary



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
P.O. BOX 59
LOUISVILLE, KENTUCKY 40201-0059
FAX: (502) 315-6677
<http://www.lrl.usace.army.mil/>

*Received
6/1/06*

May 30, 2006

Operations Division
Regulatory Branch (North)
ID no. 200600627-pmh

This is in response to your request for comments concerning:

Description: US 50 Corridor Planning and Environmental Assessment
Study

Name of Organization requesting early coordination:

Indiana Department of Transportation

We do not have any comments on the general environmental impacts of the proposed project(s). This agency is not funded or authorized to provide general environmental assessments for all federally related development proposals. Our lack of comments on specific potential environmental impacts should not be construed as concurrence that no significant environmental damage would result from the project.

1. The proposed improvement may impact the following waterway(s) under our jurisdiction:

Tanners Creek, Unnamed Tributaries of Tanners Creek, Unnamed Tributaries of the Ohio River, Hogan Creek, and Unnamed Tributaries of Hogan Creek.

2. Current and/or future plans to develop the waterway(s) include:

None

3. The following Corps of Engineer's projects and/or studies are located within the area:

None

4. The depth or elevation of Ordinary High Water (OHW) is:

____ Feet mean sea level.

____ The OHW elevation is the line on the bank established by the changing water surface and indicated by physical characteristics such as a clear natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; and other indications as determined upon inspection of the area. If additional information is needed for the OHW you may contact our Hydrology & Hydraulics Branch by calling (502) 315-6456.

**Questionnaire for the Indiana Department of Transportation,
Office of Aviation**

Project No: _____ **Des/Bridge No:** _____

Project Description:

US 50 Corridor Planning and Environmental Assessment Study
Dearborn Co, IN

Requested By:

Strand Associates, Inc.

Are there any existing or proposed airports within or near the project limits? No

If yes, describe any potential conflicts with air traffic during or after the construction of the project.

This project should have no impact on airspace or air
navigation.

This information was furnished by:

Name: Justin Klump
Title: Project Manager, INDOT-Office of Aviation
Date: 05/30/2006

DNR

Indiana Department of Natural Resources

Mitchell E. Daniels, Jr., Governor
Robert E. Carter, Jr., Director



Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.state.in.us

January 19, 2007

Leslie Trobaugh
Strand Associates, Inc.
629 Washington Street
Columbus, Indiana 47201

*all of this would
be done in the
future evaluations -
we will not be developing
APES.
received
01/22/07*

Federal Agency: Federal Highway Administration ("FHWA")

Re: Request for evaluation of alternative plans for improvements to US 50 from the Town of Dillsboro to the intersection of US 50 and I-275 east of Lawrenceburg

Dear Ms. Trobaugh:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated November 17, 2006, and received on November 21, 2006, for the above indicated project in Clay, Washington, Center, and Lawrenceburg townships, Dearborn County, Indiana.

Upon your request, we reviewed the list of parties invited to participate in consultation. Apart from Strand Associates, no other parties have expressed direct interest in the project. Additionally, we are unaware of other local historic preservation organizations who might be interested in the project. In regards to the Indiana SHPO, Kyle Hupner *{sic}* no longer holds the title of Indiana SHPO. As of December 4, 2006, Robert E. Carter, Jr., who was appointed by the Governor Daniels, became the new Indiana SHPO.

Once the information becomes available, please provide the indicated information to facilitate the identification and analysis of historic properties in the project area:

- 1) Define the area of potential effects¹.
- 2) Provide the relevant portion of a town, city, county, U.S. Geological Survey quadrangle, or Interim Report map containing the following:
 - Clearly mark the precise location of the proposed project.
 - In dark ink, clearly mark the boundaries of the area of potential effects.
 - Clearly label the names of nearby landmarks (e.g., major streets, roads, highways, railroads, rivers, lakes).
- 3) Give the precise location of any buildings, structures, and objects *within the area of potential effects* (e.g., addresses and a site map with properties keyed to it).

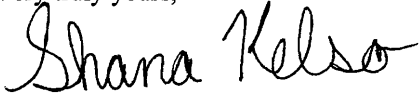
¹ Area of potential effects means the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (see 36 C.F.R. § 800.16[d]).

- 4) Give the known or approximate date of construction for buildings, structures, objects, and districts *within the area of potential effects*.
- 5) Submit historical documentation for buildings, structures, objects, and districts *within the area of potential effects*.
- 6) List all sources checked for your historical research of the *area of potential effects*.
- 7) Provide clear, recent photographs or good quality computer-generated images (not photocopies), keyed to a site plan, showing any buildings, structures, objects, or land *that could be affected in any way by the project*.
- 8) Describe the current and past land uses within the project area; in particular, state whether or not the ground is known to have been disturbed by construction, excavation, grading, or filling, and, if so, indicated the part or parts of the project area that have been disturbed and the nature of the disturbance; agricultural tilling generally does not have a serious enough impact on archaeological sites to constitute a disturbance of the ground for this purpose.

Once the indicated information is received, the Indiana SHPO will resume identification and evaluation procedures for this project. Please keep in mind that additional information may be requested in the future.

A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004, may be found on the Internet at www.achp.gov for your reference. If you have questions, please contact Shana Kelso of our office at (317) 232-3491 or skelso@dnr.IN.gov.

Very truly yours,



for: Ron McAhron
Acting Deputy State Historic Preservation Officer

RM:SNK:snk

cc: Robert F. Tally, Division Administrator, Federal Highway Administration
emc: Greg Sekula, Southern Regional Office, Historic Landmarks Foundation of Indiana
Christopher Koeppel, Indiana Department of Transportation

DNR

Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.state.in.us

Mitchell E. Daniels, Jr., Governor
Kyle J. Hupfer, Director



September 14, 2006

Leslie Trobaugh
Strand Associates, Inc.
629 Washington Street
Columbus, Indiana 47201

received
9/18/06

Federal Agency: Federal Highway Administration ("FHWA")

Re: Phase Ia archaeological literature review and reconnaissance survey report (Jackson/Vosvick, 5/8/06)
for the construction of a roadway to connect SR 1 and SR 48 north of Greendale (Lawrenceburg-Greendale Connector) (Project #STP-9415 [], Designation #9485960)

Dear Ms. Trobaugh:

Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated May 26, 2006, and received on May 30, 2006, for the above indicated project in Lawrenceburg Township, Dearborn County, Indiana.

In regards to archaeological resources, we concur with the conclusions and recommendations of the archaeological reconnaissance report that the seven sites (12D593-12D599) recorded within the project area do not appear eligible for inclusion in the National Register of Historic Places. Therefore, no further archaeological investigations appear necessary for these sites. However, portions of the proposed project area contain alluvial soils with a potential to hold buried undisturbed archaeological resources. Given the above, a Phase Ic subsurface reconnaissance will be required to determine the presence or absence of archaeological resources within the alluvial soils present within the project area. The survey must be done in accordance with the Secretary of the Interior's "Standards and Guidelines for Archaeology and Historic Preservation" (48 F.R. 44716). A plan for the subsurface investigation must be submitted to the Department of Natural Resources for review and comment prior to initiation of fieldwork. Areas where landowner permission was not obtained will need to be avoided by all project activities or subjected to archaeological investigations.

Please be advised that the reconnaissance report indicated 13 sites being recorded within one mile of the proposed project area. Based on our records, at least 9 additional sites have been recorded within one mile of the proposed project area. For future reference, a complete and thorough records review of all records pertinent to a particular project should be conducted.

In regard to buildings and structures, we still need the additional information we requested in our letter dated October 21, 2004, to Leslie Trobaugh of Strand Associates, Inc. Once it has been provided, the Indiana SHPO will resume identification and evaluation procedures for this project pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800.

A copy of the revised 36 C.F.R. Part 800 that went into effect on January 11, 2001, may be found on the Internet at www.achp.gov for your reference. If you have questions about our comments, please call our office at (317) 232-1646. Questions about archaeological issues should be directed to Cathy Draeger or Dr. Rick Jones. Questions about historic buildings or structures pertaining to this project should be directed to Shana Kelso.

Very truly yours,

Rob McAnron
Acting Deputy State Historic Preservation Officer

RM:SNK:CLD:JRJ:cld

cc: Robert F. Tally, Division Administrator, Federal Highway Administration
Christopher Jackson, Archaeological Consultants of the Midwest
emc: Christopher Koepfel, Indiana Department of Transportation
Ben Lawrence, Indiana Department of Transportation
Greg Sekula, Director, Southern Regional Office, Historic Landmarks Foundation of Indiana



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 13 2006

REPLY TO THE ATTENTION OF:

B-19J

Larry Heil, Project Manager
FHWA – Indiana Division Office
575 N. Pennsylvania St., Room 254
Indianapolis, Indiana 46204

✓ Steve Smith, Project Manager
Indiana Dept. of Transportation
N901 100 North Senate Ave.
Indianapolis, Indiana 46204-2219

Re: Alternatives Coordination Point for U.S. 50 EA/Corridor Study, Dearborn
County, Indiana (FHWA/INDOT)

Dear Mr. Heil and Mr. Smith:

The U.S. Environmental Protection Agency (EPA) reviewed the October 6, 2006, letter with enclosures from Mr. Bruce A. Rape, Strand Associates, Inc. regarding the above referenced EA/Corridor Study being conducted under the Federal Highway Administration (FHWA)/Indiana Department of Transportation (INDOT) Streamlined EIS Procedures. Mr. Rape requested EPA comment on the alternatives that are proposed to be dismissed or advanced for further study.

After reviewing the information, Ms. Virginia Laszewski of my staff contacted FHWA and spoke with Larry Heil to get clarification on this study and the information that was sent for EPA review and comment. Based on this conversation and the information we received from Mr. Rape, EPA offers the following comments.

EPA understands that the purpose of the study is to identify potential transportation system improvements to alleviate congested travel areas and safety concerns along the US 50 corridor in Dearborn County, Indiana. The total length of the project is approximately 18 miles and extends from Dillsboro through Aurora and Lawrenceburg to Greendale at the I-275 interchange with US 50. The 18-mile US 50 corridor was divided into 4 segments for analysis.

Based on the purpose and need information for this proposal, there are minor existing and future (2031) congestion and some safety issues that need to be addressed at various areas along the US 50 corridor. The Alternative Summary sheets that accompany Mr. Rape's

letter identify that the following alternatives are currently being proposed for further evaluation:

Segment 2: Aurora to Lawrenceburg [State Road (SR) 148 to SR 48]

- Intersection Improvement (US 50 at Wilson Creek Road).
- Intersection Improvement (US 50 at Wal-Mart Entrance).
- Travel System Management (TSM) Concept 11: (access management/barrier median solutions).

Segment 3: Lawrenceburg (SR 48 to Arch Street)

- Alternative 6: One-Way Pair (Mid North) – Possible Two-Way (3-lane one-way streets with short turn lanes at intersections).
- Alternative 5: One-Way Pair (Near North) (3-lane one-way streets with short turn lanes at intersections).
- Alternative 1: One-Alignment Capacity Expansion (from 4 to 6 lanes) in Downtown Lawrenceburg (requires 3 thru lanes plus dual lefts and exclusive rights at major intersections).

Segment 4: Greendale (Arch Street to I-275)

- Intersection Improvements – US 50 at I-275 Interchange (triple left turn lanes from I-275 WB, dual left turn lanes for all other movements).

At this time, EPA has no major concerns with advancing the above alternatives for further study. Based on the limited information we were given to review, it appears that the impacts associated with the above alternatives may not be significant and may be mitigable. However, we advise that future National Environmental Policy Act (NEPA) study documentation demonstrate that all avoidance, minimization and compensation efforts concerning air quality, wetlands, surface and ground water quality/quantity, aquatic habitat, upland forest land, wildlife and wildlife habitat have been incorporated into any alternative advanced for proposed implementation.

At this time, we concur with the proposed elimination of the following alternatives from further consideration:

Segment 3: Lawrenceburg (SR 48 to Arch Street)

- TSM Concept 2: No Left-Turns Allowed in Downtown Lawrenceburg.
- TSM Concept 3: Reversible Lanes in Downtown Lawrenceburg.
- Alternative 4: One-Way Pair (South) (3-lane one-way street with short turn lanes at intersections).
- Alternative 7: One-Way Pair (Far North) (3-lane one-way streets with short turn lanes at intersections).
- Alternative 8: SR 1 to SR 48 Connector (Nowlin Ave.) new terrain roadway.
- Alternative 9: SR 1 to SR 48 Connector (Indiana Glass) new terrain roadway.
- Alternative 10: New Ohio River Bridge (US 50 to KY 20).

We appreciate the opportunity to review and provide written comment on this FHWA/INDOT Streamlined EIS Procedures project. However, we note that this project did not convene any interagency coordination meetings that are supposed to take place for FHWA/INDOT's Streamlined EIS Procedures, EA/Corridor studies. We understand that all proposed interagency coordination meetings for this study were cancelled, in part, because some resource agencies, including EPA, found the proposed meeting locations inconvenient. In light of limited travel funds, EPA requests that the resource agencies be given the option to participate in all future interagency coordination meetings for this and other FHWA/INDOT Streamline EIS Procedures projects via conference call and/or webcast. EPA requests at least a 30-day advance notice of all meetings.

Thank you for giving us the opportunity to comment. If you have any questions please contact Virginia Laszewski of my staff at 312/886-7501.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Strategic Environmental Analysis

cc: Bruce A. Rape, Strand Associates, Inc., 629 Washington Street, Columbus, IN 47201
Mike Litwin, USFWS Region 3, Bloomington Ecological Services Office,
620 S. Walker Street, Bloomington, IN 47403-2121

Leslie Trobaugh

From: Scott Roush
Sent: Tuesday, December 19, 2006 11:08 AM
To: Jeff Held; Leslie Trobaugh; Bruce Rape
Subject: FW: EPA Comments on US50 Study
Attachments: US50 EPA Comments 121306.pdf

Scott Roush
Strand Associates, Inc.
629 Washington Street
Columbus, IN 47202
1.812.372.9911
1.812.372.7190 fax
scott.roush@strand.com

From: Smith, Steve [mailto:SSMITH@indot.IN.gov]
Sent: Tuesday, December 19, 2006 10:59 AM
To: Scott Roush
Cc: Baukert, Frank
Subject: EPA Comments on US50 Study

Scott, please review the comments, prepare a response to EPA and place comments in the project file or the appropriate report.

Stephen C. Smith, AICP
Manager, Long-Range Transportation Planning Section
Indiana Department of Transportation (INDOT)
N901 100 North Senate Avenue
Indianapolis, IN 46204-2219
Voice: 317-232-5646
Fax: 317-234-1228

12/19/2006

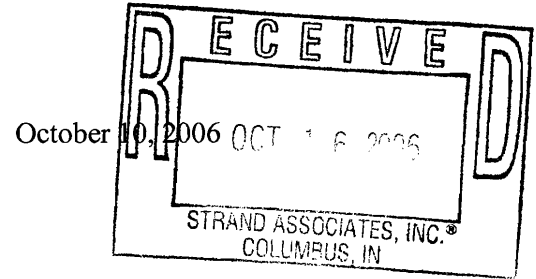


Indiana Department of Natural Resources

Mitchell E. Daniels, Jr., Governor
Kyle J. Hupfer, Director

Environmental Unit
Division of Water
402 W. Washington Street, Rm. W264
Indianapolis, IN 46204-2641

Mr. Bruce A. Rape
Strand Associates, Inc.
629 Washington Street
Columbus, Indiana 47201



RE: US 50 Corridor Study~ DNR # CTS-ER-12141-1


Dear Mr. Rape:

This is an informational letter in response to your request for an Environmental Review received at the Division of Water on October 10, 2006 for the above project in Dearborn County. We would like you to know that the review is in process. Please refer to the above DNR # when calling and on all future correspondence regarding this project.

Please note that we did not forward a copy of this request to the Division of Historic Preservation. If this project requires a review by the Division of Historic Preservation, a separate copy will need to be sent to that office.

If you have any questions or comments, please contact me at (317) 232-4160 or toll free at (877) 928-3755. You may also email me at aoliger@dnr.IN.gov or contact Christie Stanifer, Environmental Coordinator, at the number above.

Sincerely,



Alysson C. Oliger
Environmental Secretary

THIS IS NOT A PERMIT

**State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Water**

Early Coordination/Environmental Assessment

DNR #: ER-12141-1

Request Received: October 10, 2006

Requestor: Strand Associates, Inc
Bruce A Rape
629 Washington Street
Columbus, IN 47201

Project: US 50 Corridor Study

County/Site info: Dearborn

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

Regulatory Assessment: This proposal will require the formal approval of our agency for construction in a floodway, pursuant to the Flood Control Act (IC 14-28-1). Please submit a copy of this letter with the permit application.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: Wetlands and non-wetland floodplain habitat associated with Wilson Creek, Tanner's Creek, and Ohio River will be negatively affected by the proposed roadway improvements.

The Wilson Creek Road Improvements may affect habitat in the floodway of Wilson Creek upstream of US 50 that is part of the required mitigation for the relocation of Wilson Creek west of the Wal-Mart parking lot. The road project must not impact the mitigation site in any way.

The alternative for traffic congestion relief through Lawrenceburg that does not impact the wetland area near the school grounds is the recommended alternative.

Bridges should be designed to provide a minimum 8 feet tall by 24 feet wide opening that does not include the size of the opening over the channel. This opening under the bridge with unsubmerged dry land is essential for wildlife passage. If riprap is planned under the bridge, only dry land unarmored with riprap is considered in the opening dimensions. Considerations can be made if alternative armoring materials are used.

Impacts to wetlands in the floodway must be mitigated in accordance with the state wetland mitigation guidelines (see <http://www.state.in.us/nrc/policy/wetlands.html>). Impacts to non-wetland habitat in the floodway may also require mitigation. The state wetland mitigation guidelines provide information about non-wetland forested habitat mitigation requirements as well as urban forests habitat mitigation requirements.

Fish, wildlife, and botanical resource losses can be expected to occur as a result of this project. These losses can be minimized through implementation of the recommendations above and the following measures.

Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.

Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.

Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.

THIS IS NOT A PERMIT

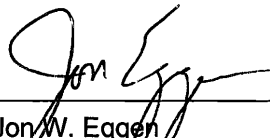
**State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Water**

Early Coordination/Environmental Assessment

Do not cut any trees suitable for Indiana bat roosting (greater than 14 inches in diameter, living or dead, with loose hanging bark) from April 15 through September 15.
Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
Do not construct any temporary runarounds or causeways.
Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction.
Post "Do Not Mow or Spray" signs along the right-of-way.
Plant five trees, at least 2 inches in diameter-at-breast height, for each tree which is removed that is ten inches or greater in diameter-at-breast height.
Do not excavate or place fill in any riparian wetland.

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Environmental Unit
Our agency appreciates this opportunity to be of service. Please do not hesitate to contact the above staff member at (317) 232-4160 or 1-877-928-3755 (toll free) if we can be of further assistance.



Jon W. Eggen
Environmental Supervisor
Division of Fish and Wildlife

Date: November 16, 2006



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
P.O. BOX 59
LOUISVILLE, KENTUCKY 40201-0059
FAX: (502) 315-6677
<http://www.lrl.usace.army.mil/>

October 30, 2006

Operations Division
Regulatory Branch (North)
ID no. LRL-2006-1431-pmh

This is in response to your request for comments concerning:

Description: US. 50 Corridor Study

Name of Organization requesting early coordination:

Indiana Department of Transportation

We do not have any comments on the general environmental impacts of the proposed project(s). This agency is not funded or authorized to provide general environmental assessments for all federally related development proposals. Our lack of comments on specific potential environmental impacts should not be construed as concurrence that no significant environmental damage would result from the project.

1. The proposed improvement may impact the following waterway(s) under our jurisdiction:

Tributaries of the Ohio River, Tanners Creek, Wilson Creek, tributaries of Wilson Creek, Hogan Creek, and tributaries of South Hogan Creek

2. Current and/or future plans to develop the waterway(s) include:

Ohio River Ecosystem Restoration Program (see attachment)

3. The following Corps of Engineer's projects and/or studies are located within the area:

None

4. The depth or elevation of Ordinary High Water (OHW) is:

____ Feet mean sea level.

____ The OHW elevation is the line on the bank established by the changing water surface and indicated by physical characteristics such as a clear natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; and other indications as determined upon inspection of the area. If additional information is needed for the OHW you may contact our Hydrology & Hydraulics Branch by calling (502) 315-6456.

5. The project site is within flood elevations:

_____ Flood plain information is available by writing this office directly and requesting a floodplain delineation for a specific area. However, we are required by law to collect a fee for this service. The fee varies with the scope and complexity of the request. If you are interested in receiving this service please re-submit this request to the above address, ATTN: CELRL-PMP or call (502) 315-6892 and we will provide information on the fee schedule. Otherwise you may be able to obtain this information from local agency sources such as planning commissions.

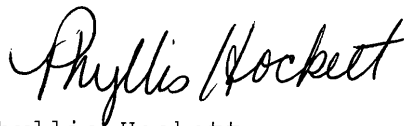
6. Wetlands:

_____ are located on the site as indicated on the attached sheet.

X To our knowledge, no wetland mapping of your proposed project site has been done, nor does the Corps of Engineers have any future plans to delineate and map jurisdictional wetlands for public or private use. If you suspect wetlands would be impacted by the discharge of dredged or fill material, a wetland delineation report conforming to the "Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1," would have to be submitted. Members of our regulatory staff having expertise in this area, would evaluate and verify the wetland delineation report as part of our review process. If you need assistance in preparing a wetland delineation, there are several environmental consultants in your geographic area having this expertise.

7. If based on your coordination with the State Historic Preservation Officer, it is determined that the project may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the Department of the Army permit application must include information stating which historic property may be affected by the proposed work and/or a vicinity map indicating the location of the historic property.

8. If your project would impact any "waters of the United States," including jurisdictional wetlands, then you should submit a Department of the Army (DA) permit application for review by this office. Copies of DA permit application forms can be obtained by writing to the above address ATTN: CELRL-OP-FN or by calling (502) 315-6733.



Phyllis Hockett
Project Manager
Regulatory Branch

Enclosure



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

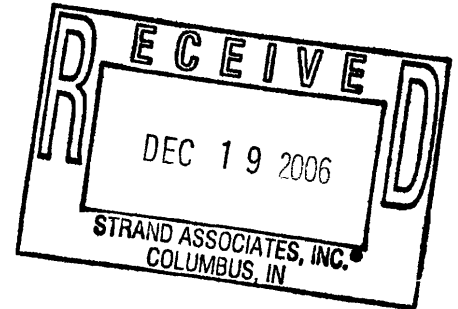
DEC 13 2006

REPLY TO THE ATTENTION OF:

B-19J

Larry Heil, Project Manager
FHWA – Indiana Division Office
575 N. Pennsylvania St., Room 254
Indianapolis, Indiana 46204

Steve Smith, Project Manager
Indiana Dept. of Transportation
N901 100 North Senate Ave.
Indianapolis, Indiana 46204-2219



Re: Alternatives Coordination Point for U.S. 50 EA/Corridor Study, Dearborn
County, Indiana (FHWA/INDOT)

Dear Mr. Heil and Mr. Smith:

The U.S. Environmental Protection Agency (EPA) reviewed the October 6, 2006, letter with enclosures from Mr. Bruce A. Rape, Strand Associates, Inc. regarding the above referenced EA/Corridor Study being conducted under the Federal Highway Administration (FHWA)/Indiana Department of Transportation (INDOT) Streamlined EIS Procedures. Mr. Rape requested EPA comment on the alternatives that are proposed to be dismissed or advanced for further study.

After reviewing the information, Ms. Virginia Laszewski of my staff contacted FHWA and spoke with Larry Heil to get clarification on this study and the information that was sent for EPA review and comment. Based on this conversation and the information we received from Mr. Rape, EPA offers the following comments.

EPA understands that the purpose of the study is to identify potential transportation system improvements to alleviate congested travel areas and safety concerns along the US 50 corridor in Dearborn County, Indiana. The total length of the project is approximately 18 miles and extends from Dillsboro through Aurora and Lawrenceburg to Greendale at the I-275 interchange with US 50. The 18-mile US 50 corridor was divided into 4 segments for analysis.

Based on the purpose and need information for this proposal, there are minor existing and future (2031) congestion and some safety issues that need to be addressed at various areas along the US 50 corridor. The Alternative Summary sheets that accompany Mr. Rape's

letter identify that the following alternatives are currently being proposed for further evaluation:

Segment 2: Aurora to Lawrenceburg [State Road (SR) 148 to SR 48]

- Intersection Improvement (US 50 at Wilson Creek Road).
- Intersection Improvement (US 50 at Wal-Mart Entrance).
- Travel System Management (TSM) Concept 11: (access management/barrier median solutions).

Segment 3: Lawrenceburg (SR 48 to Arch Street)

- Alternative 6: One-Way Pair (Mid North) – Possible Two-Way (3-lane one-way streets with short turn lanes at intersections).
- Alternative 5: One-Way Pair (Near North) (3-lane one-way streets with short turn lanes at intersections).
- Alternative 1: One-Alignment Capacity Expansion (from 4 to 6 lanes) in Downtown Lawrenceburg (requires 3 thru lanes plus dual lefts and exclusive rights at major intersections).

Segment 4: Greendale (Arch Street to I-275)

- Intersection Improvements – US 50 at I-275 Interchange (triple left turn lanes from I-275 WB, dual left turn lanes for all other movements).

At this time, EPA has no major concerns with advancing the above alternatives for further study. Based on the limited information we were given to review, it appears that the impacts associated with the above alternatives may not be significant and may be mitigable. However, we advise that future National Environmental Policy Act (NEPA) study documentation demonstrate that all avoidance, minimization and compensation efforts concerning air quality, wetlands, surface and ground water quality/quantity, aquatic habitat, upland forest land, wildlife and wildlife habitat have been incorporated into any alternative advanced for proposed implementation.

At this time, we concur with the proposed elimination of the following alternatives from further consideration:

Segment 3: Lawrenceburg (SR 48 to Arch Street)

- TSM Concept 2: No Left-Turns Allowed in Downtown Lawrenceburg.
- TSM Concept 3: Reversible Lanes in Downtown Lawrenceburg.
- Alternative 4: One-Way Pair (South) (3-lane one-way street with short turn lanes at intersections).
- Alternative 7: One-Way Pair (Far North) (3-lane one-way streets with short turn lanes at intersections).
- Alternative 8: SR 1 to SR 48 Connector (Nowlin Ave.) new terrain roadway.
- Alternative 9: SR 1 to SR 48 Connector (Indiana Glass) new terrain roadway.
- Alternative 10: New Ohio River Bridge (US 50 to KY 20).

We appreciate the opportunity to review and provide written comment on this FHWA/INDOT Streamlined EIS Procedures project. However, we note that this project did not convene any interagency coordination meetings that are supposed to take place for FHWA/INDOT's Streamlined EIS Procedures, EA/Corridor studies. We understand that all proposed interagency coordination meetings for this study were cancelled, in part, because some resource agencies, including EPA, found the proposed meeting locations inconvenient. In light of limited travel funds, EPA requests that the resource agencies be given the option to participate in all future interagency coordination meetings for this and other FHWA/INDOT Streamline EIS Procedures projects via conference call and/or webcast. EPA requests at least a 30-day advance notice of all meetings.

Thank you for giving us the opportunity to comment. If you have any questions please contact Virginia Laszewski of my staff at 312/886-7501.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Strategic Environmental Analysis

cc: Bruce A. Rape, Strand Associates, Inc., 629 Washington Street, Columbus, IN 47201
Mike Litwin, USFWS Region 3, Bloomington Ecological Services Office,
620 S. Walker Street, Bloomington, IN 47403-2121



United States Department of the Interior

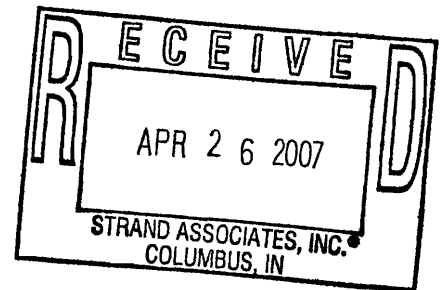
Fish and Wildlife Service



Bloomington Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

April 23, 2007

Mr. Bruce Rape
Strand Associates
629 Washington Street,
Columbus, Indiana 47201



Project: US 50 Corridor Study
Road(s): US 50 Highway
Waterway: Tanners Creek
Work Type: Road reconstruction
County(ies): Dearborn

Dear Mr. Rape:

This responds to your letter dated March 28, 2006 requesting U.S. Fish and Wildlife Service (FWS) comments on the draft Environmental Assessment/Corridor Study report for the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The draft Environmental Assessment (EA) has no substantive changes from the Purpose and Need/Alternatives Carried Forward document which we reviewed and commented on in our letter of December 4, 2006. Our recommendations in that letter to minimize impacts, as repeated below, are still appropriate for the EA.

1. Design right-of-way expansions to minimize impacts on streams and wetlands, especially Tanners Creek, Wilson Creek and Hogan Creek, and associated wetlands.
2. Design right-of-way expansions to minimize tree removal in forested areas.
3. Mitigate for unavoidable wetland impacts by wetland replacement in the same watershed.

Endangered Species

The draft EA incorrectly states that "...none of the recommended alternatives are known to lie within the habitat of the Indiana bat or running buffalo clover". We do not consider any of the alternatives carried forward to be objectionable in terms of their impacts on endangered species, however habitat for the Indiana bat and running buffalo clover is present near the study area, and we cannot make a final determination as to whether any habitat will be affected until we review individual project proposals in more detail. The endangered species comments from our December 4, 2006 letter are repeated and clarified below.

The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and running buffalo clover (*Trifolium stoloniferum*) and federally threatened bald eagle (*Haliaeetus leucocephalus*). There are no records of bald eagle nests near the project area at this time, however the species is rapidly expanding its nesting range in Indiana. There are recent records of Indiana bats and running buffalo clover near Lawrenceburg.

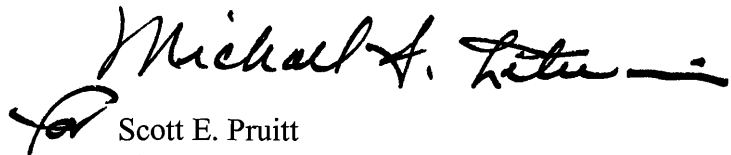
Summer habitat for Indiana bats is present in forested areas throughout the study corridor. The recent capture record of this species is along Tanners Creek, however other suitable habitat areas have not been surveyed. The advisability of conducting surveys for Indiana bats for the US 50 study will depend upon the extent to which the proposed alignments vary from the existing alignment in undeveloped, forested areas.

Running buffalo clover is typically found in Indiana in disturbed bottomlands and slopes of Ohio River tributaries. Due to the geographic scope of the study area it would be advisable to conduct a habitat survey to determine if suitable habitat for this species is present in areas to be affected by the proposed projects. Discovery of suitable habitat may indicate the need for a species-specific survey for running buffalo clover.

This endangered species information is provided for technical assistance only, and does not fulfill the requirements of Section 7 of the Endangered Species Act. We will conduct a Section 7 analysis for each project as it comes forward for review.

We appreciate the opportunity to comment at this early stage of project planning. If project plans change such that fish and wildlife habitat may be affected, please re-coordinate with our office as soon as possible. If you have any questions about our recommendations, please call Mike Litwin at (812) 334-4261 (Ext. 205).

Sincerely yours,


Scott E. Pruitt
Field Supervisor

cc: Federal Highway Administration, Indianapolis, IN
IDEM, Water Quality Standards Section, Indianapolis, IN
Christie Stanifer, Indiana Division of Fish and Wildlife, Indianapolis, IN
Virginia Laszewski, US EPA, 77 West Jackson Boulevard, Chicago, IL B-19J 60604-3590



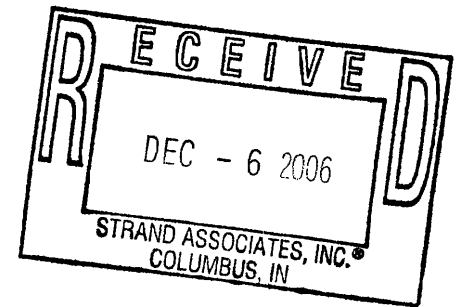
United States Department of the Interior

Fish and Wildlife Service



Bloomington Field Office (ES)
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

December 4, 2006



Mr. Bruce Rape
Strand Associates
629 Washington Street,
Columbus, Indiana 47201

Project: US 50 Corridor Study
Road(s): US 50 Highway
Waterway: Tanners Creek
Work Type: Road reconstruction
County(ies): Dearborn

Dear Mr. Rape:

This responds to your letter dated October 6, 2006 requesting U.S. Fish and Wildlife Service (FWS) comments on Purpose and Need and alternatives carried forward for the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

We have no comments on the Purpose and Need Report, which mostly addresses issues of congestion and safety. According to your letter the study includes 4 segments of US 50 from Dillsboro to IR 275 at Lawrenceburg. The majority of the project proposal involves reconstruction on approximately the existing alignment, however 3 of 10 preliminary alternatives for Segment 3 through Lawrenceburg are being carried forward for further analysis. All 3 alternatives involve existing streets and/or disturbed areas within Lawrenceburg, however Alternative 5 would slightly overlap the boundary of an urban wetland. Possible improvements to the US 50/Wilson Creek Road intersection may impinge on higher quality forested wetlands along lower Wilson Creek. Other proposed intersection improvements are at the Walmart entrance road west of Lawrenceburg and at the entrance ramp to I-275. We do not anticipate any excessive impacts on wildlife habitat from the 3 alternatives for US 50 carried forward thus far (#1, 5 and 6), all of which would affect mostly previously disturbed ground in urban areas. The proposed US 50/I-275 ramp intersection improvements, as currently proposed, would expand

right of way in all 4 quadrants for a total of approximately 4 acres. This improvement also would not result in excessive impacts as currently proposed. Alternatives 8 and 9, which were discarded, are related to a proposed Lawrenceburg Bypass study which we have reviewed extensively. Those corridors have the potential for significant habitat impacts however it appears that they will not be addressed further in this study. Discarded Alternates 4 and 7 would affect undeveloped areas to a lesser extent, however Alternate 4 would require a crossing of significant wetlands near Tanners Creek. Discarded Alternate 10, which proposes a new bridge across the Ohio River at Aurora, would also have substantial natural resource impacts, although the majority of terrestrial impacts would occur in Kentucky.

At this time we recommend consideration of the following measures to mitigate adverse impacts on fish and wildlife resources:

1. Design right-of-way expansions to minimize impacts on streams and wetlands, especially Tanners Creek, Wilson Creek and Hogan Creek, and associated wetlands.
2. Design right-of-way expansions to minimize tree removal in forested areas.
3. Mitigate for unavoidable wetland impacts by wetland replacement in the same watershed.

Endangered Species

The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalis*) and running buffalo clover (*Trifolium stoloniferum*) and federally threatened bald eagle (*Haliaeetus leucocephalus*). There are no records of bald eagle nests near the project area at this time, however the species is rapidly expanding its nesting range in Indiana. There are recent records of Indiana bats and running buffalo clover near Lawrenceburg.

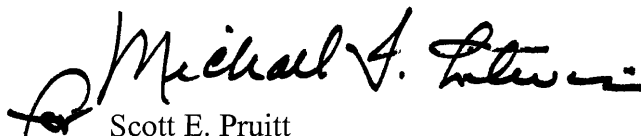
Summer habitat for Indiana bats is present in forested areas throughout the study corridor. The recent capture record of this species is along Tanners Creek, however other suitable habitat areas have not been surveyed. The advisability of conducting surveys for Indiana bats for the US 50 study will depend upon the extent to which the proposed alignments vary from the existing alignment in undeveloped, forested areas.

Running buffalo clover is typically found in Indiana in disturbed valleys and slopes of Ohio River tributaries. Due to the geographic scope of the study area it would be advisable to conduct a habitat survey to determine if suitable habitat for this species is present in areas to be affected by proposed projects. Discovery of suitable habitat may indicate the need for a species-specific survey for running buffalo clover.

This endangered species information is provided for technical assistance only, and does not fulfill the requirements of Section 7 of the Endangered Species Act.

We appreciate the opportunity to comment at this early stage of project planning. If project plans change such that fish and wildlife habitat may be affected, please recoordinate with our office as soon as possible. If you have any questions about our recommendations, please call Mike Litwin at (812) 334-4261 (Ext. 205).

Sincerely yours,

A handwritten signature in black ink, appearing to read "Michael A. Luteri".

Scott E. Pruitt
Field Supervisor

cc: Federal Highway Administration, Indianapolis, IN
IDEM, Water Quality Standards Section, Indianapolis, IN
Christie Stanifer, Indiana Division of Fish and Wildlife, Indianapolis, IN
Virginia Laszewski, US EPA, 77 West Jackson Boulevard, Chicago, IL (B-19J) 60604-3590



United States
Department of
Agriculture

Forest
Service

Hoosier National Forest
Supervisor's Office

811 Constitution Avenue
Bedford, IN 47421
Phone: 812-275-5987
Fax: 812-279-3423
TDD: 1-800-877-8339

File Code: 1950

Date: April 10, 2007

Bruce A. Rape
Strand Associates, Inc.
629 Washington St.
Columbus, IN 47201


RE: US 50; Dearborn County Environmental Assessment/Corridor Study Draft Report

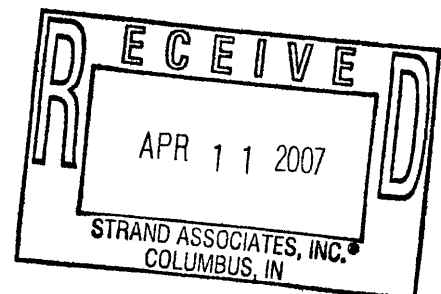
Dear Mr. Rape:

I have reviewed the above referenced proposal. Since your site is outside the Hoosier National Forest boundary, I cannot provide you with meaningful information to assist you with your project.

Thank you for making me aware of your proposal.

Sincerely,

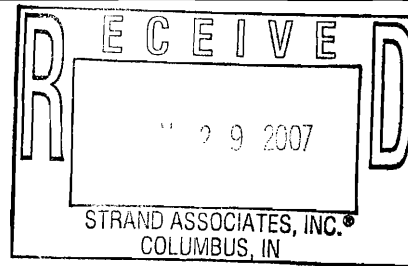

KENNETH G. DAY
Forest Supervisor



United States Department of Agriculture



Natural Resources Conservation Service
6013 Lakeside Blvd.
Indianapolis, IN 46268



January 25, 2007

Bruce A. Rape
SA Strand Associates, Inc.
629 Washington St.
Columbus, IN 47201

Dear Mr. Rape:

The project to make improvements to U.S. 50 in Dearborn County, Indiana, as referred to in your letter of October 6, 2006, will cause a conversion of prime farmland.

The attached packet of information is for your use in completing Parts VI and VII of the AD-1006. After completion the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact Lisa Bolton at 317-290-3200, extension 342.

Sincerely,

A handwritten signature in cursive script that reads "Jane E. Hardisty".

JANE E. HARDISTY
State Conservationist

Enclosures

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request 10/6/06			
Name Of Project US 50 Dearborn Co Corridor Study		Federal Agency Involved			
Proposed Land Use Roadway improvements		County And State Dearborn County, IN			
PART II (To be completed by NRCS)		Date Request Received By NRCS 10/10/06			
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated	Average Farm Size 119 Acres
Major Crop(s) Corn, soybeans	Farmable Land In Govt. Jurisdiction Acres: 104,980 % 53	Amount Of Farmland As Defined in FPPA Acres: 51,523 % 26			
Name Of Land Evaluation System Used LESA	Name Of Local Site Assessment System	Date Land Evaluation Returned By NRCS 1-24-07			
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		1.8			
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site		1.8	0.0	0.0	0.0
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		1.8			
B. Total Acres Statewide And Local Important Farmland		0.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		0.0017			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		12.0			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		85			
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points			
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS		160	0	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	85		
Total Site Assessment (From Part VI above or a local site assessment)		160	0	0	0
TOTAL POINTS (Total of above 2 lines)		260	85	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>
Reason For Selection:		

Site A represents the ROW intersection improvement at Wilson Creek road, and is the only part of this Study that has an impact.

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request 10/6/06			
Name Of Project US 50 Dearborn Co Corridor Study		Federal Agency Involved			
Proposed Land Use Roadway improvements		County And State Dearborn County, IN			
PART II (To be completed by NRCS)		Date Request Received By NRCS 10/10/06			
Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated	Average Farm Size 119 Acres
Major Crop(s) Corn, soybeans	Farmable Land In Govt. Jurisdiction Acres: 104,980 % 53	Amount Of Farmland As Defined in FPPA Acres: 51,523 % 26		Date Land Evaluation Returned By NRCS 1-24-07	
Name Of Land Evaluation System Used LESA	Name Of Local Site Assessment System				
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		1.8			
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site		1.8	0.0	0.0	0.0
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		1.8			
B. Total Acres Statewide And Local Important Farmland		0.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		0.0017			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		12.0			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		85			
PART VI (To be completed by Federal Agency)					
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))	Maximum Points				
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	85			
Total Site Assessment (From Part VI above or a local site assessment)	160	0	0	0	0
TOTAL POINTS (Total of above 2 lines)	260	85	0	0	0
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>			

Reason For Selection:

Site A represents the ROW intersection improvement at Wilson Creek road, and is the only part of this Study that has an impact.

INDIANA UNIVERSITY



812-855-1366

INDIANA
GEOLOGICAL SURVEY

November 16, 2006

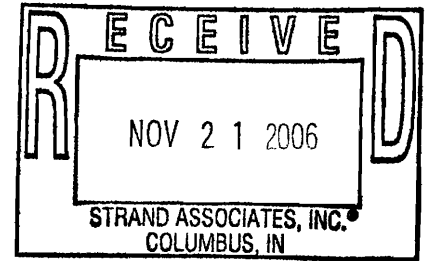
Bruce A. Rape
Strand Associates, Inc.
629 Washington Street
Columbus, IN 47201

Dear Mr. Rape,

This letter is in response to your inquiry, dated October 6, 2006, regarding the proposed alternatives for transportation improvements along the US 50 corridor from Town of Dillsboro through to the Town of Greendale, Dearborn County, IN. The activities you have described should not be affected by, nor have an effect on the geology of the area.

Sincerely,

Marni D. Karaffa
Geologist



611 North Walnut Grove
Bloomington, Indiana
47405-2208

812-855-5067
Fax: 812-855-2862

**Questionnaire for the Indiana Department of Transportation,
Office of Aviation**

Project No: _____ **Des/Bridge No:** _____

Project Description:

US 50 Corridor; Lawrenceburg, IN

Requested By:

Strand Associates, Inc.

Are there any existing or proposed airports within or near the project limits? No

If yes, describe any potential conflicts with air traffic during or after the construction of the project.

This project should have no impact on airspace or air navigation.

This information was furnished by:

Name: Justin Klump
Title: Project Manager, INDOT-Office of Aviation
Date: 10/26/2006

APPENDIX C
FIRST COMMUNITY ADVISORY COMMITTEE AND PUBLIC
INFORMATION MEETING MINUTES AND COMMENTS (APRIL 2006)

MEMORANDUM

- | |
|--|
| <input type="checkbox"/> Information Only |
| <input type="checkbox"/> Project Specific |
| <input type="checkbox"/> Policy Memo - File With |

TO: File
FROM: Scott Roush, Strand Associates, Inc.
DATE: April 18, 2006
RE: INDOT US 50 Corridor Planning Study and Environmental Assessment

This date a meeting was held at the Adult Learning Center, 311 West Tate Street, Lawrenceburg, Indiana from 3:00 – 5:00 with the Community Advisory Committee (CAC) to discuss the Purpose and Need of the project. This was the first of three meetings that are required by Indiana's Streamlined EIS Procedures.

A list of those attending is attached.

The meeting began with a Power Point presentation by Scott Roush (see attached) discussing the results of the Existing Conditions Report and the Purpose and Need statement. The meeting then broke into four small groups with the task of identifying additional issues that affected the operation of US 50. Copies of the draft Existing Conditions Report and the draft Purpose and Need documents were available at each table as well as a blank aerial photograph of the project corridor. Each group then reported a summary of their discussion. Following is a summary of those comments.

- It was suggested that the study should not terminate at I-275. It was suggested that the study be extended to the State Line due to the amount of anticipated development. It was also suggested that SR 1 also be included in this study. SR 1 via Bellview Avenue has a very poor cross section with significant truck traffic. The existing SR 1 bridge over the railroad tracks is a bottleneck.
- The segment of US 50 between Aurora and Wilson Creek Road/Wal Mart entrance should receive additional analysis regarding traffic operations. Specifically, the George Street, SR 148 (Sunnyside Avenue), Wilson Creek Road and Wal Mart entrance (Sycamore Estates) intersections should receive intersection level analysis rather than be included as part of a larger corridor. Additional safety and deficiencies analysis should occur through this segment.
- Chris McHenry should be contacted regarding locations of specific historic structures. Specific structures mentioned were Flowers By Vicki structure and a church in Lawrenceburg.
- Primary issues are congestion on US 50, Bellview Avenue/SR 1 truck traffic and bottlenecks at SR 48 and at Wal Mart.

- There are no good bypass solutions. The River to the south and steep hills to the north make US 50 the only good corridor for improvement.
- Corridor needs access management. Need to limit access at controlled intersections, service roads or combined accesses for 4-5 stores.
- County redevelopment should be included in meetings.
- Portions of US 50 are designated as a National Scenic Byway
- Any proposed improvements should recognize the historic value of individual structures and districts along the study corridor.
- Make sure that the SR 48 realignment is included in project planning.
- In Dillsboro there is poor access to the Solid Waste Management District, the flashing lights that serve Dillsboro and at the casket company during shift changes. Sight distance is also a problem.
- As sewer access is provided along US 50 in the Dillsboro area there will be more access points as economic development occurs. Setbacks should be adequate so that sight distance is not affected.
- There is a cemetery behind Steak & Shake and the overpass in Greendale.
- Hillside development is causing drainage problems due to under sized culverts and erosion
- The Tanners Creek bridge and the floodplain are critical features
- Traffic is currently using Greendale via Ridge Road as a cut through to avoid US 50. This is glutting up existing City streets. Elderly and youth are afraid to drive on US 50.
- Need left and right turn lanes at new developments such as theatre and at Kroger.

Specific Improvement Suggestions

- Turning lane/capacity improvements should be considered at Wilson Creek Road, SR 148 (Sunnyside Road), George Street, and Blair Road in the Aurora area. Add additional capacity from SR 148 to George Street and from Wilson Creek Road to Wal Mart. Also look at new access to Wal Mart from Wilson Creek Road

- The “suicide lane” should be removed and replaced with a median.
- A new bridge over Tanners Creek is needed now. It can’t wait.
- Need computer controlled traffic lights that can adjust signal times based on conditions.
- Cooperate with Ohio to place a new interchange at I-275 and Stephens to take load off of I-275 at SR 1.

MEMORANDUM

- | |
|--|
| <input type="checkbox"/> Information Only |
| <input type="checkbox"/> Project Specific |
| <input type="checkbox"/> Policy Memo - File With |

TO: File
FROM: Leslie Trobaugh, Strand Associates, Inc.
DATE: April 28, 2006
RE: INDOT US 50 Corridor Planning Study and Environmental Assessment
CC: Tim Lawson, Doe Anderson

This date a public information meeting was held at the Lawrenceburg High School, in Lawrenceburg, IN. Representing INDOT: Mary Jackman, Frank Baukert; Strand Associates: Scott Roush, Leslie Trobaugh; Doe Anderson: Tim Lawson; M-E: Erin Peterson, Brian Forscher.

Public information meetings are held to create an informal opportunity for local residents to participate in the process of implementing projects that affect their communities. The next public information meeting for the US Corridor Study is tentatively scheduled for September; at that time proposed alternatives will be presented for public comment.

Mary Jackman briefly explained the comment process and the agenda for the evening. Scott Roush then summarized the study process (see power point presentation listed on this website). Erin Peterson discussed the Gateway Study, which is a separate, but complementary study focused on land use and access management for the US 50 corridor. A question and answer period followed the presentations. A representative selection of questions/responses follows:

- Will other connections to US 50, such as SR 1 be studied since these other roads impact traffic on 50? Response- Other roads would only be looked at only to the extent that we examine traffic patterns on the corridor; where is US 50 traffic coming from and where does it want to go. The focus is US 50 and what we can do to ease the problems along this route
- What is an acceptable number of access points to have on US 50? Some businesses could be reached from roads behind the building – will you look at that? Response- Access points along the corridor are evaluated based on how they affect traffic flow, accident rates and congestion. It seems pretty clear that the number of access points along the corridor from Aurora through Lawrenceburg contributes to the problems. One possible solution could certainly be access via alternate roads. Impacts to current land use along those alternate routes would have to be examined.
- People are used to hearing the word “study” and seeing nothing happen. Could smaller solutions be implemented quickly, then it would help the public feel something was being done? Response – There will be both short-term and long-term solutions developed. Low impact, less expensive improvements could be implemented much more quickly by the local INDOT district. The alternatives that are large dollar, off-route items, for example a new road, would take much

more time and more in depth study. This study will allow INDOT to move forward with evaluating the more complex solutions without having to go back to developing a purpose and need, which can be time consuming.

- What will happen when Tanner's Creek Bridge is worked on? Will detours be created? Response –Various scenarios will be examined, including the increased cost to traffic for any detour, impacts to traffic due to lane closures, etc. This crossing is so important to the community, any solution will focus on as little disruption to traffic flow as possible.
- How did you determine future traffic volumes? Cincinnati residents are looking to get away from the crime, etc., and looking across the river to Dearborn County. Response – A generalized growth factor was used. Data from other studies such as Dearborn County's Transportation Assessment were reviewed. A Traffic Demand Model is being developed which is a computer model that can be used to test possible solutions and traffic flow. It is possible that after the Model is completed that some of the projected traffic volumes for 2031 could go up or down

The question and answer period closed with an invitation for anyone interested in becoming a member of the Community Advisory Committee (CAC) to leave their contact information with Tim Lawson so that they could be notified of the next CAC meeting.

PO Box 156, Aurora, IN 47001
(812) 926-1100

MAIN STREET AURORA

Fax

To: Leslie Trobaugh

From: Karla Fry Schmelzer

Fax: 812-372-7190

Pages: 3

Phone: 812-372-9911

Date: 4/5/08

Re: Community Advisory Committee

CC:

☐ **Urgent**

☐ **For Review**

☐ **Please Comment**

☐ **Please Reply**

☐ **Please Recycle**

● **Comments:**

Attached is the Community Advisory Committee Nomination Form and corrections for your records

Please contact me if you have any questions.

Karla Fry Schmelzer

PO Box 156

Aurora, IN 47001

812-926-1100



Please make the following
corrections to your records

March 24, 2006

829 Washington Street
Columbus, IN 47201
Phone: 812-372-9911
Fax: 812-372-7190

~~Ms. Judy Ostendorf~~
Main Street Aurora
~~404 Fourth Street~~
Main Street Suite
Aurora, IN 47001

Karla Fry Schmeltzer
P.O. Box 156

Office Locations

Madison, WI
Joliet, IL
Louisville, KY
Lexington, KY
Mobile, AL
Columbus, IN
Lancaster, OH
Indianapolis, IN
Milwaukee, WI
Cincinnati, OH

www.strand.com

~~Dear Ms. Ostendorf:~~

We are inviting Main Street Aurora to designate a representative to serve on the U.S. 50 Corridor Community Advisory Committee (CAC), a group that will help identify concerns and review options as a corridor study is initiated to determine the best approach for improving this important roadway.

The CAC is a critical part of this study, authorized by the Indiana Department of Transportation that will identify a range of options and make recommendations for addressing transportation needs along the 18-mile stretch of U.S. 50 from Dillsboro to I-275.

The CAC will include a representative group of people who live, work and travel along U.S. 50. Meetings will take place three times over the next year on either a Tuesday or Thursday evening, and will last about two hours each. The first Community Advisory Committee meeting will be held from 6:00-8:00 p.m. on **Tuesday, April 18** at the Dearborn Adult Center at 311 West Tate Street.

If you are interested in being a part of this endeavor, please complete the enclosed Committee member form and return it to us via fax or mail. If you have any questions concerning the form or meeting plans, please call Leslie Trobaugh at 812-372-9911.

Public meetings also will be an integral part of the U.S. 50 Corridor Study. Meetings will be held about one week after the Community Advisory Committee meeting. Please join us for an overview of the study at the first U.S. 50 Corridor Study public meeting at 6:00-8:00 p.m. on **Tuesday, April 25** at Lawrenceburg High School, located at 100 Tiger Boulevard.

Thank you in advance for your assistance. We look forward to working with you on this project.

Sincerely yours,

Scott Roush
Project Manager

**Strand Associates is the engineering firm contracted for the U.S. 50 Corridor Study and public involvement process.*

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

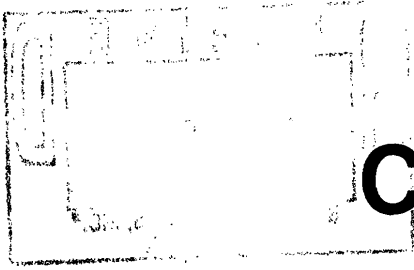
Name Ty Howell
Organization/Representing Greendale
Street Address 170 U.S. Highway 50
City Greendale, Ind. Zip Code 47025
Daytime Phone Number 513-479-4068 Fax Number _____
E-mail Address _____
Neighborhood East U.S. 50

Comments or concerns about U.S. 50:

Three major concerns. 1st traffic flow.
2nd would be speed, safety, 3rd making it
beneficial for new business.

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190



U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name Tom Steidel
Organization/Representing City of LAWRENCBURG
Street Address P.O. Box 4166 / 230 Walnut St.
City LAWRENCBURG, IN Zip Code 47025
Daytime Phone Number 812-532-3583 Fax Number 812-532-3560
E-mail Address steidelt@col-in.net
Neighborhood _____

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name C. JOY SENITZA
Organization/Representing _____
Street Address 16317 JEANNE DRIVE
City AURORA Zip Code 47001
Daytime Phone Number 812-744-2399 Fax Number SAME *
E-mail Address azsunny@seidata.com
Neighborhood
MANCHESTER TOWNSHIP

Comments or concerns about U.S. 50:

HOW WILL THE PROPOSED TALLERS CREEK
BRIDGE PROJECT ALLEViate THE 2 MILE
BACK UP FROM HOME FURNITURE TO WILSON
CREEK ROAD WEST OF TALLERS CREEK?

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

* CALL FIRST



Ohio • Kentucky • Indiana
Regional Council of Governments

FAX MESSAGE

DATE: 4-4, 2006

TO: Leslie Trobaugh

FROM: Regina Jauer

Message:

Attached you will find the
US 50 Corridor Study Advisory
Committee nomination form

Thanks

Total number of pages including cover page: 2

Please Reply: _____ by fax: phone no.: _____ e-mail: _____

Hard copy WILL/WILL NOT be sent

If there is a problem with the receipt of this message or if it is not complete,
please call the sender at (513) 621-6300.

Gary W. Moore
President

Mark R. Polcinski
Executive Director

FAXED
4-4-06

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name Robert Koehler, Deputy Executive Director
Organization/Representing OKI Regional Council of Govts.
Street Address 720 East Pete Rose Way # 420
City Cincinnati Zip Code 45202
Daytime Phone Number 513-621-6300 Fax Number 513-621-9325
E-mail Address rkoehler@oki.org

Neighborhood

Alternate: Bill Miller, Regional Planning Manager

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name MICHAEL ROROW
Organization/Representing DEARBORN CO. CHAMBER
Street Address 320 WALNUT
City LAWRENCEBURG Zip Code 47625
Daytime Phone Number 812.537.0814 Fax Number 812.537.0845
E-mail Address MROROW@SEI.ATA.COM
Neighborhood DOWNTOWN LAWRENCEBURG

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name Chris Mueller
Organization/Representing County Master Plan Board, Dearborn County Public Forum Blog News.
Street Address 18203 Pribble Road
City Lawrenceburg IN Zip Code 47025-9662
Daytime Phone Number 812-537-4221 Fax Number —
E-mail Address Chrissiemueller@earthlink.net
Neighborhood Pribble Road/Lawrenceburg Township (outside city limits)

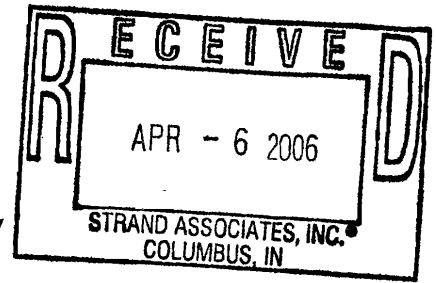
Comments or concerns about U.S. 50:

served on Master Plan Advisory Board - noted many
concerns from county residents. Concerned with
short term fixes that might hurt local businesses
& retail shopping patterns.
would like to see land use and community needs
addressed.
Concerned with AGING POPULATION & US50 safety
issues.

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study



Community Advisory Committee Nomination Form

Name BILL BLACK JR
Organization/Representing DEARBORN COUNTY EMERGENCY MANAGEMENT
Street Address 401 WEST HIGH ST
City LAWRENCEBURG Zip Code 47025
Daytime Phone Number 812 537 3971 Fax Number 812 537 4726
E-mail Address dc_ema@earthlink.net
Neighborhood _____

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name NICOLE DAILY
Organization/Representing BAYER BECKER / PLANNER & RESIDENT
^(HOME)
Street Address 8796 Moody Road
City Moore's Hill, IN Zip Code 47032
Daytime Phone Number 812-537-9064 Fax Number 812-537-9505
E-mail Address nicole.daily@bayerbecker.com
Neighborhood
Mt. Sinai (Hogan & Manchester Township)

Comments or concerns about U.S. 50:

- Too many entrances onto US 50 - they should combine some entrances.
- All the lights being added to the road.
- Congestion points - US 50 through Lawrenceburg (Tanners creek to Argosy) and Wal-Mart area in Aurora.

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Study Advisory Group Nomination Form

Name Jeff L Hughes
Organization/Representing Dearborn County District 1 Commissioner
Street Address 1702 Yodel Odel Ln
City Lawrencsburg Zip Code 47025
Daytime Phone Number 812-584-6407 Fax Number 812-532-2003
E-mail Address jhughes@dearborncounty.in.gov
Neighborhood _____

Comments or concerns about U.S. 50:

Comments on attached page
The congestion on U.S. 50 from the 275 intersection to 350 intersection has been significantly detrimental to the area in a number of ways. Stifling economic development west of the intersection, effectively choking off transportation during peak hours, impact freight and commercial endeavors, in general discourages entrepreneurial efforts. Which in turn decreases the opportunity for job creation.
Please mail or fax completed form to:
Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190
Devalues equity west of the intersection.
Increases traffic volumes on roads less equipped to handle the increased traffic.
The choke points increase fuel consumption decrease air quality.
A displeasure of the general public at capacity failure. A special concern for urgency comes from the ~~commercial~~ added cost and expense for needed improvements and land acquisition from the slowly expanding local business the longer more time passes the more expense.

U.S. 50 CORRIDOR STUDY

The congestion on US 50 from the 275 intersection to 350 intersection has been significantly detrimental to the area in a number of ways. Stifling economic development west of the intersection, effectively choking off transportation during peak hours, impacting freight, discouraging manufacturing and commercial endeavors for the reluctances of people to leave the traffic jam for fear of being unable to return, in general it discourages entrepreneurial efforts. This in turn decreases the opportunity for job creation. It devalues real estate equity west of the intersection. Increases traffic volumes on roads less equipped to handle the increased traffic patterns. Choke points increase fuel consumption decrease air quality. The congestion also creates displeasure of the general public at the capacity failure. A special concern for urgency comes from the commercial growth along US50 although slow it is continuing and with the growth comes added cost and expense for needed improvements and land acquisition. The goal I would like to see is a clear and concise strategy for evaluating and eliminating the congestion, an answer that the most impacted Municipalities along with county and state can implement to a final and successful solution.

Jeff Hughes

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name Steven E Lampert
Organization/Representing City of Greendale City Manager
Street Address 510 Ridge Ave
City Greendale IN Zip Code 47025
Daytime Phone Number 537 2125 Fax Number 537 2310
E-mail Address Slampert@earthlink.net
Neighborhood _____

Comments or concerns about U.S. 50:

- Traffic congestion on US 50 backs up onto City of Greendale streets
- Need to complete a detailed traffic study to determine where people are trying to get to. This will determine best Alternatives

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190



PROJECT	BY	DATE	JOB NO.
---------	----	------	---------

Allan Cornelius
organizing
street
City
daytime
email

Historic Lawrenceburg Foundation
139 Ridge Ave
Lawrenceburg IN 47025
537-4277 call 812-290-9502
- N/A

Reel Estate |

Community Advisory Committee.

1
couldn't fax
on
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U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name Mark McCormack
Organization/Representing Dearborn County Plan Commission (Director)
Street Address 215B West High Street
City Lawrenceburg Zip Code 47025
Daytime Phone Number (812) 537-8821 Fax Number (812) 532-2029
E-mail Address mccormack@dearborncounty.in.gov
Neighborhood _____

Comments or concerns about U.S. 50:

*Concerns/about U.S. 50: Congestion
(Issues) Access Management / Safety concerns
Land Use / Development Opportunities

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name RANDY HILDEBRAND
Organization/Representing DEARBORN CO. DCS
Street Address 230 MARY AVE, SUITE 150
City LAURENCEBURG, IN Zip Code 47025
Daytime Phone Number 812-537-5131 Fax Number 812-537-8890
E-mail Address RHildebrand@fssa.state.in.us
Neighborhood AURORA & GREENDALE

Comments or concerns about U.S. 50:

PLEASE GET A GOOD ALTERNATE ROUTE OVER TANNER
CREEK ESTABLISHED ASAP. WHEN THE NEW SR 48 PROJECT
IS COMPLETE - WILL FREEBIE BE STRAIGHTENED & WIDENED
TO ACCEPT A LARGER VOLUME OF TRAFFIC?

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

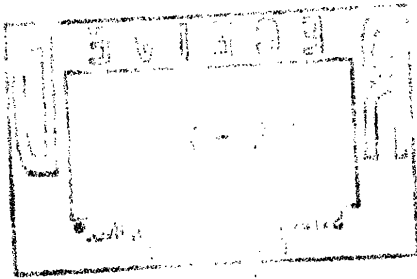
Community Advisory Committee Nomination Form

Name Dr. John Rahe (812) 926-2826
Organization/Representing Main Street Aurora
Street Address P.O. Box 156 231 Main Street
City Aurora Zip Code 47001
Daytime Phone Number 812-926-1100 Fax Number 812-926-1080
E-mail Address mainstreetaurora@suscom.net
Neighborhood
City of Aurora

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190



U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name Robert J. Sauerbrey (Bob)
Organization/Representing Miller Township - Citizen
Street Address 1928 Oakridge Dr.
City Lawrenceburg ^(Bright) Zip Code 47025-9156
Daytime Phone Number 812-656-8866 Fax Number 513-741-2312
E-mail Address bsauerbrey@lasallehs.net OR 3
Neighborhood Bright sauerbreyr@xavier.edu

Comments or concerns about U.S. 50:

The road passes through a number of
jurisdictions 2 towns, 1 city, + the county -
any lasting solution must be regional
in scope - possibly extending even into
Hamilton Co. Ohio from which most traffic
comes or to which it goes - we have missed

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

many opportunities here, especially that of building
a frontage road with limited access to US 50 before
the unregulated, ^{though foreseen} explosion of retail + domestic
development occurred.

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name PHIL PICHE'
Organization/Representing GRACE CHURCH OF THE VALLEY
Street Address 10021 HAUBROCK RD,
City SUNMAN Zip Code IN 47041
Daytime Phone Number 812-926-0110 Fax Number 812-926-3550
E-mail Address PIPELINE47041@YAHOO.COM
Neighborhood _____

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name Mrs. LaVerne M. Kolb (County Woman Leader)

Organization/Representing Farm Bureau, Inc. (Dearborn)

Street Address 474 Benedic Lane

City Lawrenceburg, In. Zip Code 47025

Daytime Phone Number 812-637-3640 Fax Number _____

E-mail Address Kolbview@mycidco.com

Neighborhood

Bright- use U.S. 50 for all business for farm & Personal

Comments or concerns about U.S. 50:

Industry be kept along U.S. 50 - Not go after
Farm Land beyond U.S. 50. Use lead in roads having
2, 3 or more industries using one access entrance to
U.S. 50. Use of stop lights at U.S. 50 entrances from
Industries). The need for dual bridges across Trimmers
Creek. If accident takes place on one end or the other of present
bridge access to hospital from Lawrenceburg must go a long way
around using Please mail or fax completed form to:
Indiana 1, Pribble and
backtrack U.S. 48 to
hospital.

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

called -

U.S. 50 Corridor Study

Study Advisory Group Nomination Form

Name Tom Steidel
Organization/Representing City of Lawrenceburg
Street Address 230 Walnut St
City Lawrenceburg Zip Code 47025
Daytime Phone Number 812-532-3553 Fax Number 812-532-3560
E-mail Address STEIDELT@COL-IN.NET
Neighborhood _____

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name PETER RESORCK
Organization/Representing DEARBORN COUNTY HOSPITAL
Street Address 1000 WILSON CREEK ROAD
City LAURENCEBURG Zip Code 47025
Daytime Phone Number 537-8200 Fax Number 537-2897
E-mail Address PRES@dch-deg
Neighborhood _____

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Study Advisory Group Nomination Form

Name BILL ULLRICH
Organization/Representing DEARBORN COUNTY COUNCIL - VP
Street Address 103 DETBORAH DR.
City AURORA Zip Code 47001
Daytime Phone Number (512) 584-4478 Fax Number -
E-mail Address B2BULLRICH@EARTHLINK.NET
Neighborhood AURORA - WOODLAWN AREA.

Comments or concerns about U.S. 50:

UNLESS THE TRAFFIC FLOW PROBLEMS ARE
FIXED, EVERYTHING WEST OF THE LIBRARY
AURORA AREA WILL CONTINUE TO STAGNATE
& ANY PLANS FOR IMPROVEMENT/DEVELOPMENT
WILL BE DIFFICULT, IF NOT IMPOSSIBLE, TO "SELL"

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

S. 125 E FAF

U.S. 50 Corridor Study

Study Advisory Group Nomination Form

Name BRYAN C MESSMORE
Organization/Representing DEARBORN COUNTY
Street Address 215 B WEST HIGH ST.
City L'BURG Zip Code 47025
Daytime Phone Number 812-584-2232 Fax Number 812-532-2003
E-mail Address bmessmore@dearborncounty.in.gov
Neighborhood _____

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
~~812-372-9911~~
Fax: 812-372-7190

U.S. 50 Corridor Study

Study Advisory Group Nomination Form

Name G. Michael Witte
Organization/Representing Dearborn Superior Court No. 1
Street Address 215 West High Street
City Lawrenceburg Zip Code 47025
Daytime Phone Number 812-537-8874 Fax Number 812-532-2032
E-mail Address mwitte@dearborncounty.in.gov
Neighborhood _____

Comments or concerns about U.S. 50:

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

DEARBORN SUPERIOR COURT NO. 1

Hon. G. Michael Witte, Judge
215 W. High Street
Lawrenceburg, IN 47025

812/537-8874 - Office

812/532-2032 - Fax

FAX COVER SHEET

DATE: March 28, 2006

TIME: 1:40 AM/PM

PAGES: 2 (including cover sheet)

TO: Leslie Trobaugh

812-372-7190

FROM: G. Michael Witte, Judge
Dearborn Superior Court No. 1

MESSAGE:

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name Dave J. Schorsch
Organization/Representing Dearborn County Solid Waste Mgmt
Street Address 7030 US 50 10700 Prospect Ln
City Aurora Zip Code 47001
Daytime Phone Number 812-926-9963 Fax Number 812-926-9668
E-mail Address dschorsch@dearborncounty.in.gov
Neighborhood
Washington Township

Comments or concerns about U.S. 50:

I live and work on U.S. 50 and
wish to be a part of the study
concerning the US 50 development

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Community Advisory Committee Nomination Form

Name

Jennifer Hughes

Organization/Representing

Dearborn County Soil & Water Conservation District

Street Address

10729 Bondall Avenue, Suite 2

City

Aurora

Zip Code

47001

Daytime Phone Number

(812) 926-2106^{x109}

Fax Number

926 4412

E-mail Address

jennifer-hughes@leeward.org

Neighborhood

Comments or concerns about U.S. 50:

too many entrances w/out stoplights should
all connect to 1 stoplight every so
many feet
stoplight timing in morning & evening
commute

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

U.S. 50 Corridor Study

Study Advisory Group Nomination Form

Name Mark McCormack ; Director of Planning
Organization/Representing Dearborn County Planning + Zoning
Street Address 215 B West High Street
City Lawrenceburg Zip Code 47025
Daytime Phone Number (812) 537-8821 Fax Number (812) 532-2029
E-mail Address mccormack@dearborncounty.in.gov
Neighborhood _____

Comments or concerns about U.S. 50:

Concerns: Congestion
Access Management
Land Use Opportunities
Establishing an identity to the corridor
Alleviate safety concerns / crash areas

Please mail or fax completed form to:

Leslie Trobaugh
629 Washington Street
Columbus, IN 47201
812-372-9911
Fax: 812-372-7190

From: Leslie Trobaugh
To: bsauerbrey@lasallehs.net
Date: 4/10/06 11:42AM
Subject: U.S. 50 CAC

Hi Bob -

Thank you for the phone call re your application for participation in the Community Advisory Committee for the U.S. 50 Corridor Study. We did receive your form & look forward to working with you on this project.

Leslie Trobaugh
Environmental Specialist
Strand Associates, Inc.
629 Washington St.
Columbus, IN 47201

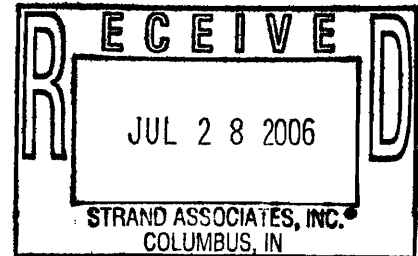
leslie.trobaugh@strand.com
812.372.9911

John A. Rahe, D. D. S.
204 Hillview Drive
Aurora, Indiana 47001

812-926-2826

johnrahe@comcast.net

Scott Roesh
Strand Associates, Inc.
629 Washington Street
Columbus, Indiana 47201



July 25, 2006

Dr. Mr. Roush:

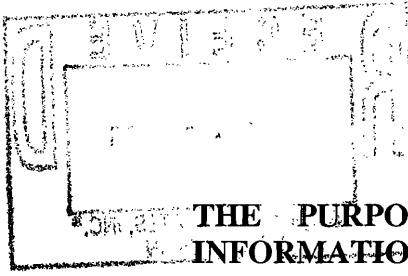
Pedestrian safety and traffic flow are ever increasingly serious concerns in the City of Aurora because of the way U.S. 50 bisects our once pedestrian friendly city. Before U.S. 50 chopped through the center of our town, people safely walked from the "Westside" and "Northside" areas of our community to the downtown businesses, churches, schools, etc.

Pedestrians would stop risking their lives and disrupting traffic if walkways were constructed under the U.S. 50 – Hogan Creek Bridge at both ends. The one at the North or East end could easily become a bicycle or non-vehicular trail connecting to the ALT (Aurora-Lawrenceburg Trail) already in existence.

Any study or project directed at improving traffic flow through Aurora should include these walkways or trails.

Sincerely,

John A. Rahe, D. D. S.



U.S. 50 CORRIDOR STUDY

THE PURPOSE OF THIS MEETING IS TO PROVIDE INFORMATION TO CONCERNED CITIZENS AND TO RECEIVE INPUT AND FEEDBACK. THIS FORM IS PROVIDED FOR YOUR CONVENIENCE TO COMMENT ON THE PROJECT OR THE PRESENTATION. COMMENTS MAY BE SUBMITTED TODAY, OR MAILED ANYTIME IN THE NEXT TWO (2) WEEKS TO:

Leslie Trobaugh, Strand Associates, 629 Washington St., Columbus, IN 47201

E-MAIL: Leslie.Trobaugh@strand.com

THANK YOU FOR ATTENDING THIS MEETING.

FINAL COMMENT DATE:
May 9, 2006

LOCATION: U.S. 50
Dearborn County, IN

NAME: (PLEASE PRINT)

Dr Thomas Carrico

ADDRESS: 120 Industrial Dr

Lawnsonburg IN 47025

E-MAIL: TCARRICOC@AOL.COM

COMMENTS:

Make Sure you don't on businesses
by closing during business hours.
INDOT That They
will close The day.
These jobs = AT NIGHT!!
Most Municipal women & incomes
of The loc.

*Discusses
Redistribution
access*

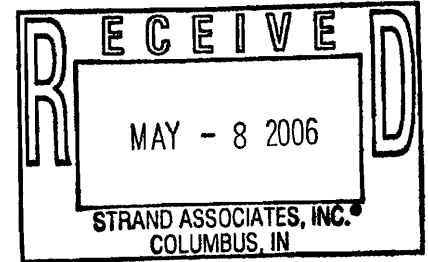
Signature

SIGNATURE: [Signature]

Richard E. Cutter
1472 Fairway Drive
Lawrenceburg, IN 47025-9521

May 4, 2006

Leslie Trobaugh
Strand Associates
629 Washington St.
Columbus, IN 47201



Dear Leslie,

For the last 20 years residents of Dearborn County have complained about the traffic on U.S. 50. INDOT's response has always been the same, "We need to evaluate existing and future conditions". Study after study has been done and yet INDOT has done nothing but spend money on these studies. With all the studies that have been done over the last 20 years you should have a very good understanding that the traffic in Dearborn County is not getting any better. It's time INDOT stopped spending money on studies and actually did something to solve the traffic problems. I read in the Dearborn County Journal-Press that a meeting was held on April 25 at the Lawrence High School and only 25 people showed up. Maybe it's because the people of the county know that the only thing INDOT will put before the public is, "We need a study". You can bet you last dollar that if the Governor lived in this area U.S. 50 would get fixed.

Thank you,

Richard E. Cutter
Richard Cutter

From: "Jack Maas" <JackMaas@jtmfoodgroup.com>
To: <leslie.trobaugh@strand.com>
Date: 5/6/06 4:13PM
Subject: US50

Dear Leslie,

I have been living in his beautiful area for 25 years. Fortunately or unfortunately the population has grown sufficiently and continues to grow. City and county leaders continue to allow building permits both on US 50 and surrounding (retail, commercial, industrial and residential). Now one of the good things for the government is that the more population and building, the higher the tax revenue (city, county and state). We have the Cincinnati metropolitan area right next door to draw more residents from, which by the way is where a lot of our existing growth has come from. Northern Kentucky has done a much better job at this than we have. Now I'm not saying that we need to do the same as Northern Kentucky but we need to do something.

Most workers in the area have to leave the area to find well-paying jobs. That could change with the right road and infrastructure. I currently live about half way between Aurora and Milan on Route 350. If I drive to Harrison using US50 it takes 35 minutes under normal traffic. If I drive a Harrison across 101 entering at the Sunman entrance at I74 it takes 45 minutes. Now, it is always a guessing game when there is going to be traffic along US50 so that I would make a decision to take the back way.

A while ago I heard about a road being laid out between Markland dam and St. Leon. This could create access to the interstate, it could create industrial areas with good access and they could be regulated. This would give a lot more access to the entire county. This would put anybody home from Cincinnati faster as well as open up property for a lot of different uses. Now I understand there are a lot of people that are concerned with that but the real fact is we need to be responsible because the people are already here the buildings are already here if we wanted to keep it as a rural community where about 10 years too late. Zoning committee needs to be brought in from the outside if necessary to do the job right. Part of our community is rural, residential, industrial, commercial etc..

Now your folks can do all the analysis that they want however, I drive this daily, I own and operate the sales department of a relatively large business with 350 employees and I understand what it's going to take to fix this is massive. So someone has to get aggressive and you're going to have a bunch of people that are going to want to keep as many on US50 as possible because of sales and you're going to have a lot of people that don't wanna lose their world environment but guess what I said before it's too late to a certain degree but the right zoning committee can keep it. Call and talk to me any time you would like I would like to share my opinion anytime.

Jack Maas
15134 Lattimer Road
Moores Hills, Indiana
47032

812-744-3370

From: "j k" <docdestructo@excite.com>
To: <leslie.trobaugh@strand.com>
Date: 5/6/06 11:49PM
Subject: Highway 50 traffic

Leslie, As a 40 year resident of Indiana and daily user of the Highway 50 corridor through Aurora and Lawrenceburg, I have come to a few simple solutions to the traffic snarl. I am certainly not one to brag on myself, but I am a trained advanced driver. The first and most obvious conclusion that I can draw is the computer controlled timing of the traffic lights from I-275 all the way to Highway 350. If said lights were timed to turn sequentially and stay green for a period of just 2 minutes, traffic would be allowed to flow unimpeded, thus eliminating the ever present daily backup. In turning back to red, they should be timed to turn, again, in sequential order from the I-275 light on through the corridor allowing for enough time to elapse to clear the vehicles from between the lights. This would leave enough room for the vehicles on the side streets to have access to 50 and the space in which to wait for the next round of green lights. In fairness to the people who use

the side streets frequently, this scenario would not have to be enacted 24/7. Only during the morning and evening rush hours would it be most advantageous (typically 0530-0830 and 1530-1830). Enforcing speed limits would have little or no effect on the flow of traffic except to perhaps make it slower. I strongly suspect the select individuals, who find it necessary to ignore the old fashioned virtue of "common courtesy" by occupying the left lane at Sunday cruising speed, to be the ones who are complaining about the speed limit. Too many of these drivers are the type that need education in order to handle the complexities of turning lanes and signals. The overall situation could also benefit from a few of the side street accesses to be eliminated. The entrance to Bob Sumerel Tire in Aurora and Shipping Street in Lawrenceburg are likely suspects. Bob Sumerel and White Castle can be easily accessed from the light at the entrance to Wal-Mart. People have an awful habit of trying

to turn north on Shipping Street from the busy eastbound lanes on 50 causing no end of fancy brake demonstrations by those of us who are not considered to be "morning" types. Since it is apparent that adding more lanes would be infeasible and costly, I firmly believe that the aforementioned suggestions would be worth a try. I would be most grateful if you would please give this matter some consideration. Thank you for your attention. J KnoxAurora IN

Join Excite! - <http://www.excite.com>
The most personalized portal on the Web!

From: "paul" <pfreys2@fuse.net>
To: <leslie.trobaugh@strand.com>
Date: 5/4/06 3:11PM
Subject: Fw: US 50

----- Original Message -----

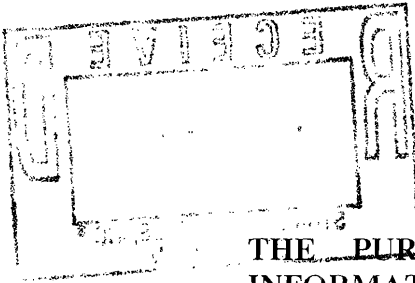
From: paul
To: leslie.trobaugh@strand.com
Sent: Thursday, May 04, 2006 2:45 PM
Subject: US 50

Hi Leslie,

We live on Georgetown Rd., not in Lawrenceburg, In. We avoid Us 50 in Lawrenceburg at all times. It is very frustrating when you can drive from Georgetown Rd. to Us50 in ten minutes and then spend 20 minutes going from Main and US 50 to the Post Office. I always went with the understanding that the traffic on US 50 in Lawrenceburg was kept screwed up to satisfy the few business's on US 50. We do our shopping in Harrison, Ohio or 98% of the time in Florence, Ky. just to avoid the stress of trying to drive in our area, even with the price gouging of gasoline.

Making traffic flow through Lawrenceburg in not rocket science, I feel that a few simple steps would make the traffic flow through Lawrenceburg , First, putting signs at the fairgrounds westbound and the Post Office east bound all through trucks MUST use the right lane. (This must be enforced) Second, the traffic light timing at Main and US 50, westbound is a mess. When one gets a green the traffic is already backed up because of the light at Rt.48 is not timed properly. It should have westbound traffic cleared so that the traffic can flow. The lights should be timed so that if you maintain 25 mph from St.Lawrence church at Walnut you would catch most lights being green.

If you have to wait a few extra seconds to get onto US 50 and once on fifty you keep moving the wait would be worth it. Paul & Phyllis Frey 20772 Georgetown Rd. Lwbg.In.47025 Pfreys@fuse.net 637-6687



U.S. 50 CORRIDOR STUDY

THE PURPOSE OF THIS MEETING IS TO PROVIDE INFORMATION TO CONCERNED CITIZENS AND TO RECEIVE INPUT AND FEEDBACK. THIS FORM IS PROVIDED FOR YOUR CONVENIENCE TO COMMENT ON THE PROJECT OR THE PRESENTATION. COMMENTS MAY BE SUBMITTED TODAY, OR MAILED ANYTIME IN THE NEXT TWO (2) WEEKS TO:

Leslie Trobaugh, Strand Associates, 629 Washington St., Columbus, IN 47201

E-MAIL: Leslie.Trobaugh@strand.com

THANK YOU FOR ATTENDING THIS MEETING.

FINAL COMMENT DATE:
May 9, 2006

LOCATION: U.S. 50
Dearborn County, IN

NAME: (PLEASE PRINT)

ADDRESS:

John A. Rahe, D.D.S.
204 Hillview Drive
Aurora, IN 47001

E-MAIL:

COMMENTS:

If the US 50 - I-275 intersection is an "F"
the Walmart intersection is an "E" and the
Wilson Creek, Sunnyside and George St. intersections
are also "F's."

Getting rid of many residences that
are precariously located along the stretch
of road between George St. and Walmart
would significantly reduce the over-
sight and allow for widening the road
and for landscaping the hillside. (In keeping with the Ohio
River scenic highway)

SIGNATURE:

John Rahe

Dr. John Rahe

Representing Main Street Aurora

Immediate Steps to be taken to improve U.S. 50 to positively influence the economy of downtown Aurora and all of the City of Aurora.

- 1. West bound right turn lane at Wilson Creek Road**
- 2. West bound right turn lane at S.R. 148 - Sunnyside Ave.**
- 3. Add an additional west bound lane between S.R. 148 and George Street in Aurora**
- 4. Wal-Mart Access**

Expand existing access to seven lanes

- one entering from the east**
- two entering from the west**
- two exiting to the west**
- two exiting to the east**

with appropriate expansion of U.S. 50

or

New additional access from Wilson Creek Road and expansion of Wilson Creek Road to six lanes from U.S. 50 to Wal-Mart entrance/exit.

From: "richardullrichjr@netzero.net" <richardullrichjr@netzero.net>
To: <leslie.trobaugh@strand.com>
Date: 5/2/06 11:43PM
Subject: U.S. 50 Alternative Possibilities...Keep the Trail a Trail!

Leslie Trobaugh
 Strand Associates
 629 Washington Street
 Columbus, IN 47201

U.S. 50 Alternative Possibilities...Keep the Trail a Trail!

Q: What coordinated/cooperative transit services(rail, coach, vanpool, water-transit) are being seriously considered as part of the U.S. 50 solutions set?

A:

Q: Is the former Alton Box Company property in Aurora being looked as a "transit hub?" (Parking structure and train/motorcoach/water-transit station).

A:

Q: How can an agreement be made with the State of Kentucky to direct I-275 traffic (esp. tourism related traffic...this is a very scenic route) to the Petersburg, Kentucky exit and then revive the Ohio River Ferryboat service from Petersburg to Lawrenceburg & Aurora?

A:

Q: How are daily commuters being surveyed as to their suggested solutions/ willingness to use cooperative/alternative transportation?

A:

Q: What amount of the "Major Moves" dollars are available to spend on this project?

A:

As Lawrenceburg's Mayor Cunningham very accurately stated in the Tuesday, May 2nd Journal-Press,

"(U.S. 50 is) a road that is almost impossible to expand."

And, since past planning eliminated the concept of access roads while increasing the frequency of traffic lights, perhaps a business access road can be built behind all of the businesses on the eastbound side of U.S. 50 from Wilson Creek Road to S.R. 48.

Or, S.R. 1. And, perhaps Wilson Creek Road can become a newly improved S.R. 148, linking Hwy. 50 to the Dearborn County Hospital and Dearborn Country Club.

It seems that the businesses on the south side of U.S. 50's eastbound lane may find it helpful to have a roadway dedicated specifically to customers, deliveries and a less-congested route from Lawrenceburg to Aurora

(especially during the peak "rush hours" during the weekday mornings & evenings).

Finally, it had also been suggested (in the past) that the newly constructed "Dearborn Trail," connecting Aurora to Lawrenceburg, be utilized as a "Bypass U.S. 50."

Hopefully, this alternative has been or will be officially eliminated from the solutions set.

This Trail was built to provide a safe, non-motorized alternative to the gauntlet of the current U.S. 50 and should be maintained and utilized as such for generations to come.

Thanks for your assistance and consideration-

Richard M. Ullrich, Jr.

403 Main Street

Aurora, IN 47001

812-926-0803

c: Mayor Hastings, Aurora

Mayor Cunningham & City Mgr. Tom Steidel, Lawrenceburg
 Mayor Hedrick, Greendale
 Debbie Smith, Dearborn County CVTB
 Mike Rozow, Dearborn County Chamber of Commerce
 Nancy Spivey, NKy Chamber of Commerce
 Ed Dierking, John Mehrle Aurora-Lawrenceburg Trail Founders
 Tim Weber, Weber Sports
 JournalPress
 Gov. Mitch Daniels
 Gov. Ernie Fletcher

CC: <dhastingsjr@seidata.com>, <dsmith@visitsoutheastindiana.com>,
 <edierking6@aol.com>, <gdalemayor@suscom.net>, <mayor@col-in.net>, <steidelt@col-in.net>,
 <mdaniels@gov.in.gov>, <nspivey@nkychamber.com>, <timw@batesvilleproducts.com>,
 <aurora@registerpublications.com>

From: "Jackman, Mary" <MJACKMAN@indot.IN.gov>
To: <Leslie.Trobaugh@Strand.com>
Date: 5/10/06 8:11AM
Subject: FW: u.s.50 corridor

Good Morning Leslie,

Please find the attached comment in regard to US 50 in Lawrenceburg. Would you please acknowledge to Mrs. Ross that you have received the comment and explain who you are? Please do not include all of the attached INDOT people unless you would BLIND COPY. I'm simply trying to keep the public direct to the source at this time.

Hope your "arm" is doing better!

Thanks,

Mary

-----Original Message-----

From: Clark, Rickie
Sent: Tuesday, May 09, 2006 11:47 AM
To: Jackman, Mary
Subject: FW: u.s.50 corridor

FYI.....comment for US 50 project in Lawrenceburg.

-----Original Message-----

From: Parrish, Charlene
Sent: Tuesday, May 09, 2006 7:12 AM
To: 'Betsy Ross'
Cc: Clark, Rickie; Sadler, Lyle
Subject: RE: u.s.50 corridor

Hello again,

Thank you for your follow-up to me. I will forward your comments to Rickie Clark, Manager of INDOT's Hearings Section, for

inclusion into the public transcript for the proposed US 50 project.

Thank you again and have a very pleasant day! Charlene

Driving Indiana's Economic Growth

Charlene Parrish

Correspondence Coordinator

Indiana Department of Transportation

100 N. Senate Avenue

Room N755

Indianapolis, Indiana 46204

(317) 232-5117

cparrish@indot.state.in.us

-----Original Message-----

From: Betsy Ross [mailto:flagmaker7@earthlink.net]

Sent: Monday, May 08, 2006 5:43 PM

To: Parrish, Charlene

Subject: Re: u.s.50 corridor

Sorry, thought I was emailing the person who was at that meeting. Yes, it is about not many people showed up at the meeting.

----- Original Message -----

From: Parrish, Charlene <mailto:CPARRISH@indot.IN.gov>

To: Betsy Ross <mailto:flagmaker7@earthlink.net>

Sent: Monday, May 08, 2006 9:57 AM

Subject: RE: u.s.50 corridor

Good morning,

Are your comments the result of a Public Meeting

that was held by INDOT? I was not sure where to forward your comments and I noticed at the end you stated you were at a meeting?? Thank you for letting me know. Charlene

Driving Indiana's Economic Growth

Charlene Parrish

Correspondence Coordinator

Indiana Department of Transportation

100 N. Senate Avenue

Room N755

Indianapolis, Indiana 46204

(317) 232-5117

cparrish@indot.state.in.us <mailto:cparrish@indot.state.in.us>

-----Original Message-----

From: Betsy Ross [mailto:flagmaker7@earthlink.net]

Sent: Saturday, May 06, 2006 3:30 PM

To: indot@ai.org

Subject: u.s.50 corridor

We know there is a difficult time ahead as we try to figure out how to get the needed traffic through the Dearborn Co. to Ohio/kentucky state lines.

In Lawrenceburg, there was talk of a straight through road along the railroad track section from Center Street along to one of the stoplights at the edge of Aurora. The Lawrenceburg City Board and the Lawrenceburg Conservancy Board did studies to see if it was feasible to extend the levee system. A \$5,000,000 study was done and it was progressing until the mayor and the city started disagreeing where the money from the gambling boats should be used. It was shelved.

Another idea is to get a ferry system started back up between Hogan and Tanner Creek to get vehicles to Petersburg, KY and to the 275 express way.

This is 20 years past due. The load has been too long on this small 4 lane highway and the number of cars who have to use it on any given day to get to employment.

Thank you for working towards a solution. The small turnout at the meeting is because we are all very tired of getting our hopes up that there is a solution at hand, when there is not.

Best Regards,

Betsy Ross 812-584-0872

6724 U.S. 50

Aurora, IN 47001

CC: "Clark, Rickie" <RCLARK@indot.IN.gov>

From: Leslie Trobaugh
To: JFalls@doeanderson.com
Date: 9/16/06 11:29AM
Subject: flyer for P.I.

Jason - please send a copy of the flyer about the upcoming public information meeting to:

William F. Dixon
5317 E CR 300N
Milan, IN 47031

I promised we would notify him about the meeting. He didn't know about the last one until after the fact & is interested because he has farmland in the area.

Thanks
Leslie

APPENDIX D
SECOND COMMUNITY ADVISORY COMMITTEE AND PUBLIC
INFORMATION MEETING MINUTES AND COMMENTS (SEPTEMBER 2006)

MEMORANDUM

- | |
|--|
| <input type="checkbox"/> Information Only |
| <input type="checkbox"/> Project Specific |
| <input type="checkbox"/> Policy Memo - File With |

TO: File
FROM: Leslie Trobaugh/Scott Roush, Strand Associates, Inc.
DATE: September 19, 2006
RE: INDOT US 50 Corridor Planning Study and Environmental Assessment

This date a meeting was held at the Adult Learning Center, 311 West Tate Street, Lawrenceburg, Indiana from 3:00 – 5:00 with the Community Advisory Committee (CAC) to discuss the Alternatives that have been developed in response to the Existing Conditions Report & the Purpose and Need Statement of the project. This was the second of three meetings that are required by Indiana's Streamlined EIS Procedures.

The meeting began with a Power Point presentation by Scott Roush (see attached). The findings of the Existing Conditions Report and the Purpose and Need statement were briefly discussed, followed by the presentation of those alternatives that for reasons such as impacts, cost or inability to fulfill the purpose and need, have been discarded. The presentation ended with a discussion of the alternatives and concepts that have been proposed to be moved forward for further study. The meeting then broke into two groups. Each group was asked to evaluate the alternatives and note any issues or changes that could be implemented. The groups were also encouraged to create their own alternatives on the aerial photos that were provided. Following is a summary of the group comments as well as some comments made during the Power Point presentation.

- Question: If a new bridge was built over the Ohio how much traffic would it divert?
Answer: It is estimated that a new bridge could divert up to 50% of the existing US 50 traffic.
- Question: The construction year is 2017 – can't improvements be made before then?
Answer: The year 2017 was used just for purposes of comparison. Some alternatives would be able to be constructed prior to that date; more ambitious alternatives would take a longer period of time.
- Question: Will the downtown Lawrenceburg improvements help Greendale & Dillsboro.
Answer: In general the alternatives that were developed were done so to address the specific problems within that area. No single viable alternative can address every issue.

- Group One Comments:

If one-way pairs are utilized there must be provisions made so that emergency vehicles aren't slowed in response time.

Why not make Alternate 6 two-way on both routes? Would make it much easier to get to specific locations.

Alternate 5 just doesn't appear to be much of a solution, especially considering cost.

The I-275 problem could be significantly improved by straightening the Bridge on SR 1.

Prohibiting trucks from SR 1 would cure the congestion. The trucks are mainly using that route as a bypass to the weigh stations.

- Group Two Comments:

Access management needed at Cole Lane and Industrial Park.

Keep downtown Lawrenceburg streetscape looking "historic" or "green".

Consider a Wilson Connector to siphon Wilson Creek traffic to Wal-Mart.

Belleville needs to be fixed – include it with the I-275 improvement.

Is there a viable solution to parallel US 50 to the south between Aurora & Lawrenceburg?

Likely to be future business development on Florence Drive past the apartments. It is already hard to access US 50 if turning left from there.

Build a new bridge from Aurora to Kentucky.

Erin Peterson, with ME Companies, also briefly discussed the Gateway Study, which is evaluating land use and access control along the US 50 corridor. Many of the recommendations from this companion study will be able to be implemented as short-term solutions to congestion, as well as lowering the existing crash rates at various locations across the corridor. The meeting ended with the announcement that the third and final CAC meeting will be held sometime in the spring. The next Public Information meeting will be held at Lawrenceburg High School on Tuesday, September 26th at 6:00 pm. The target date for the conclusion of the Corridor Study is May, 2007.

Attendees:

CAC Members

Bill Black, Jr., Dearborn County Emergency Management

Nicole Daily, Bayer Becker

Donnie Hastings, Mayor of Aurora

Jennifer Hughes, Dearborn County Soil & Water Conservation District

Jeff Hughes, Dearborn County District 1

LaVerne Kolb, Farm Bureau, Inc.

Steven Lampert, City of Greendale

Todd Listerman, Dearborn County Engineer

Mark McCormack, Dearborn County Planning & Zoning

[Initials]S:\@SIECO\051--100\060\078\Wrd\Env\CAC-SAG\09-19-06 CAC.doc\092407

September 19, 2006

Chris Mueller, County Metro Planning Board

Peter Resnick, Dearborn County Hospital

Michael Rozow, Dearborn County Chamber

Steve Wirth, Hidden Valley Lake Property Owners' Association

INDOT Representatives

Mary Jackman

Frank Baukert

Gateway Study

Erin Peterson, ME Companies

Bob Koehler, OKI

Bill Miller, OKI

Corridor Study

Marc Rape, Strand Associates

Scott Roush, Strand Associates

Leslie Trobaugh, Strand Associates

Jason Falls, DOE Anderson

MEMORANDUM

- | |
|--|
| <input type="checkbox"/> Information Only |
| <input type="checkbox"/> Project Specific |
| <input type="checkbox"/> Policy Memo - File With |

TO: File
FROM: Leslie Trobaugh/Scott Roush, Strand Associates, Inc.
DATE: September 26, 2006
RE: INDOT US 50 Corridor Planning Study and Environmental Assessment
CC: Jason Falls, Doe Anderson

This date a public information meeting was held at the Lawrenceburg High School, in Lawrenceburg, IN. Representing INDOT: Mary Jackman, Frank Baukert, Ken Riddell, Marvin Jenkins, Jim Ude; Strand Associates: Scott Roush, Leslie Trobaugh; Doe Anderson: Jason Falls; M-E: Erin Peterson

Public information meetings are held to create an informal opportunity for local residents to participate in the process of implementing projects that affect their communities. The next public information meeting for the US Corridor Study is tentatively scheduled for late winter or early spring 2007; at that time more detailed information will be available regarding the alternatives that have been selected to move forward for further study.

Mary Jackman briefly explained the comment process and the agenda for the evening. Scott Roush then summarized the alternatives that have been developed in response to the need for improvements to the US 50 Corridor in Dearborn County. The focus of the presentation was on those alternatives that will be advanced for additional development. A question and answer period followed the presentation. A representative selection of questions/responses follows:

- Has the traffic in the morning rush hour been studied? Response - Yes. Peak am and pm hours were reviewed at selected intersections. Level of Service indicated how the intersections function at the current level of traffic as well as how they will function based on future expected traffic levels.
- What does the number of relocations mean? Response - Relocations is the term used to define the residential, commercial and industrial structures that would have to be acquired, due to either revised or new alignments. There are also instances when a commercial property may need to be acquired because of its inability to function due to loss of access.
- Some of the alternatives appear to run on top of the levee. Response – The alignment would not run on top of the levee but would be in the vicinity. At this point we can't say which side would be the more likely location.
- How much traffic is on Wilson Creek Road that it needs two lanes turning onto US 50? Response – The Travel Demand Model (which extrapolates future traffic levels) indicates that Wilson Creek will need this additional lane to function at an adequate level of service in the

future. This is not always due to amount of traffic, but back-ups can also occur due to the heavy cycle on US 50 which then inhibits the turning movements onto the heavier traveled road.

- Why not build a new road from Walmart to Wilson Creek? Response - Our model indicated that this road would cause the Wilson Creek/US 50 intersection to fail
- Why not look at the Pribble Creek to SR 1 bypass? Response - This alternative was studied. Although this project may have merit to move forward as a local project, it is not proposed as a solution to the US 50 congestion. The modeling indicates that not enough traffic would be diverted to this bypass to significantly lower traffic volumes on US 50.
- Why wasn't the intersection of SR 350 and US 50 looked at? Response – Two levels of analysis were used in studying the corridor. Not every intersection was reviewed individually. The corridor was divided into segments. Each segment was reviewed to see if it functioned adequately. The SR 350/US 50 intersection was studied as part of the overall corridor study.
- We want answers about the new bridge. Response – All of our planning is contingent on the new Tanners Creek Bridge being a committed project, and that the bridge will be in place prior to the construction of any alternatives developed from this study.
- How will the new bridge help the congestion? Response - The new bridge will not be a replacement structure but will provide an additional crossing. INDOT does have a project plan in place to rehabilitate the existing bridge in 2008. When that happens, the capacity of US 50 to move traffic will be reduced, which the City of Lawrenceburg views as having a negative impact on both traffic and economic development.
- Why is the City building the bridge? Response – if the city builds the bridge, then it can be done on a much speedier track. If Federal funds were used, it would be highly unlikely that it could be done prior to the rehab work.
- Were traffic studies done for 2006? Response – Yes. Counts have been taken along the corridor and at selected intersections.

The meeting concluded with the invitation for anyone interested to join the Community Advisory Committee group. The next public information meeting will be held in late winter or early spring. The study is expected to be concluded in May, 2007.

U.S. 50 CORRIDOR STUDY

THE PURPOSE OF THIS MEETING IS TO PROVIDE INFORMATION TO CONCERNED CITIZENS AND TO RECEIVE INPUT AND FEEDBACK. THIS FORM IS PROVIDED FOR YOUR CONVENIENCE TO COMMENT ON THE PROJECT OR THE PRESENTATION. COMMENTS MAY BE SUBMITTED TODAY, OR MAILED ANYTIME IN THE NEXT TWO (2) WEEKS TO:

Leslie Trobaugh, Strand Associates, 629 Washington St.,

Columbus, IN 47201

E-MAIL: Leslie.Trobaugh@strand.com

THANK YOU FOR ATTENDING THIS MEETING.

FINAL COMMENT DATE:

October 10, 2006

LOCATION: U.S. 50

Dearborn County, IN

NAME: (PLEASE PRINT)

GLASS PRO INC Wendell Fields President

ADDRESS:

95 W. Eads PKwy
Lawrenceburg IN 47025

E-MAIL:

Wenf307@aol.com

COMMENTS:

Location is very critical to my buisness. I have to remain on Rt 50 in a high exposer area alternate 1 is not an option for me unless they will relocate me on 50 near I275 between my current location and the 275 exit at no cost to me in the same size, type building - Alternate 6 will not effect us being relocated but changes our exposure which could effect our buisness. Alternate 5 appears to be the best option as long as we donot have to be relocated and we could put our signage on the back of our building to retain our current exposer

SIGNATURE:

Wendell Fields

Please contact me with Any Questions
I Did not recieve this form until 11-17 that is why
you are just Recieving it

Wendell Fields
513-383-2882

From: Leslie Trobaugh
To: Jason Falls; Scott Roush
Date: 9/15/06 3:25PM
Subject: Re: Fw: REPLY U.S. 50 Corridor Study CAC Meeting

Jason - If you want to reply to Mr. Sauerbrey you can let him know that the afternoon meetings were not set up at the behest of anyone from Dearborn Co. government. We scheduled CAC meetings for the afternoon for a couple of reasons. #1 was to differentiate these meetings from the public information meetings which we schedule one to two weeks after the CAC meetings. These are two different groups and we just felt that having them held at different time periods would help to separate them out in people's minds - especially since quite a few CAC members also come to the public information meetings. The second reason was to be able to give people who cannot attend night meetings another venue to be a part of the voice of the community. Perhaps what we can do, though is to take a poll at the next meeting & let majority rule for the third & final meeting as to what time works best for the most people.

Leslie

Leslie Trobaugh
Environmental Specialist
Strand Associates, Inc.
629 Washington St.
Columbus, IN 47201

leslie.trobaugh@strand.com
812.372.9911

>>> Jason Falls <JFalls@doeanderson.com> 09/15/06 2:59 PM >>>
Scott and Leslie,

Just thought I'd pass along a response I got from Bob Sauerbrey to my e-mail reminder about Tuesday's CAC meeting. I have not responded to him and won't unless you feel it necessary. If we do have a solid reasoning for the 3-5 p.m. meeting time, we should probably respond with an explanation and express our desire to have him attend. I don't know the history of the communications with Mr. Sauerbrey, however, and will wait for your input before responding.

Thanks,

Jason

DOE ANDERSON

Jason Falls
Public Relations Account Manager
620 West Main Street
Louisville, KY 40202
502.815.3257 (p)
502.815.3557 (f)
205.482.5120 (m)
jfalls@doeanderson.com

<http://www.doeanderson.com>

----- Forwarded by Jason Falls/Louisville/DoeAnderson on 09/15/2006 02:55 PM -----

bsauerbrey@lasallehs.net
09/15/2006 02:48 PM

To
Jason Falls <JFalls@doeanderson.com>
cc
bsauerbrey@lasallehs.net, sauerbreyr@xavier.edu
Subject
Re: REPLY U.S. 50 Corridor Study CAC Meeting

Jason,

I mentioned this at the first meeting which happened to occur during vacation time for me. Meeting in the late afternoon guarantees a small attendance since any of us working with any regularity will find that time impossible. Since all three present county commissioners oppose the long term plan which many of us worked on, it appears Vera Benning and her two boy toys really don't want representation at this meeting.

You might recall that the first meeting was originally scheduled for 7-9 p.m. and was changed to 3-5 p.m. with no real explanation. I will not be there though I think my input to be important. Perhaps when lame-duck Vera is gone from the commission we will have a fair representation. The fact that the local Republican party is not supporting the candidate whom the Republicans of the county chose for commission in the primary indicates that real change is unlikely. It certainly helps retain incompetents when those who can do the job are muscled out by simply meeting at times those persons cannot attend important meetings.

Enjoy the meeting--though any results will be obviously tainted and incomplete. So be it.

Bob Sauerbrey
Miller Township Citizen Rep.
Advisory Committee to Dearborn County
Planning Commission

A REGISTER PUBLICATION

THE JOURNAL PRESS

TUESDAY, SEPTEMBER 19, 2006

Comment on proposed ways to improve U.S. 50 traffic

Public meeting set for Sept. 26

STAFF REPORT

Dearborn County residents now have a chance to see proposed alternatives aimed at improving safety and traffic flow on U.S. 50.

The alternatives will be presented and discussed during a

public meeting from 6 p.m. to 8 p.m. Tuesday, Sept. 26, in the Lawrenceburg High School auditorium, 100 Tiger Blvd.

The concerns were identified largely from an April public meeting and subsequent public remarks on the U.S. 50 Corridor study overview.

Details from the study's existing conditions report, which includes traffic data and accident reports, also were used,

said project manager Scott Roush, Strand Associates.

Strand Associates and Wilbur Smith and Associates, are the engineering firms conducting the study for the Indiana Department of Transportation.

"The meeting is not just the next step in the process, but is a chance for the public to actually see lines drawn on maps to visualize what these alternative

concepts may look like," said Roush.

People will be able to offer ideas to assist planning and design of the corridor. Ideas presented at the April meeting were "insightful" and "have been incorporated into our thinking. We are looking forward to their thoughts on the potential alternatives," said Roush.

SEE U.S. 50, PAGE 10A

U.S. 50, FROM PAGE 1A

INDOT officials and representatives of Strand Associates and Wilbur Smith & Associates, the engineering firms conducting the study, will present potential alternatives to efficiency and safety needs for the corridor, said Roush.

The study, scheduled to take 18 months, will help officials determine feasible methods for addressing traffic problems by exploring short-term traffic-management solutions and long-term capacity improvements, he said.

The 18-mile stretch of U.S. 50 through Dearborn impacts traffic flow in Lawrenceburg,

Greendale, Aurora and Dillsboro.

Another public meeting is scheduled for late winter or early spring.

A second complementary U.S. 50 corridor study, initiated by Dearborn County through Ohio-Kentucky-Indiana Council of Governments and M•E Companies, Westerville, Ohio, is also under way, focusing on planning and land use concepts along the corridor.

More information about both corridor studies can be found at www.dearborncounty.org/planning.

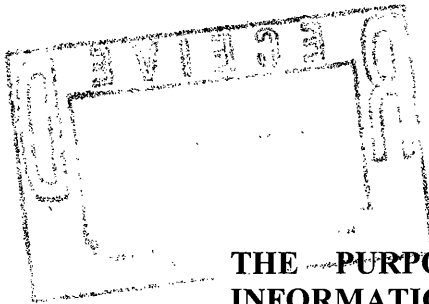
From: "jhayes101@juno.com" <jhayes101@juno.com>
To: <Leslie.Trobaugh@strand.com>
Date: 10/12/06 8:50AM
Subject: traffic congestion on US 50

Leslie

My name is Joe Hayes my wife and I own the property on the corner of 4Th and main streets, one block off of highway 50. We have the drawings in the paper and drawings the city of Lawrence burg has given us of the proposed changes to US 50. When talking to the city they were not sure how this intersection will be affected and weather or not there will be traffic lights and crosswalks at this intersection. I hope the future plans include crosswalks and lights as it is now there are none, During the peak times you cannot even cross the street, or get out of your car with children. There are many residents that live in this block and about five businesses. We are afraid that all the studys are being done just to insure traffic flow thru town and not to residents and businesses everyday activity's. When we met with the Law. city manager his thoughts were only on getting as much traffic thru town as fast as possible. There are a lot of residents feel that the new bridge across tanners creek is being pushed thru just to insure no traffic tie ups in front of Argosy during the original bridge on tanners creek resurfacing project. We are also concerned that are property at 501 main will be taken in order to rework this intersection of 4Th and main street. Any info that you could pass along will be greatly appreciated.

Joe Hayes

jhayes101@juno.com
812-926-3713
812-290-6066



U.S. 50 CORRIDOR STUDY

THE PURPOSE OF THIS MEETING IS TO PROVIDE INFORMATION TO CONCERNED CITIZENS AND TO RECEIVE INPUT AND FEEDBACK. THIS FORM IS PROVIDED FOR YOUR CONVENIENCE TO COMMENT ON THE PROJECT OR THE PRESENTATION. COMMENTS MAY BE SUBMITTED TODAY, OR MAILED ANYTIME IN THE NEXT TWO (2) WEEKS TO:

Leslie Trobaugh, Strand Associates, 629 Washington St.,
Columbus, IN 47201

E-MAIL: Leslie.Trobaugh@strand.com

THANK YOU FOR ATTENDING THIS MEETING.

FINAL COMMENT DATE:
October 10, 2006

LOCATION: U.S. 50
Dearborn County, IN

NAME: (PLEASE PRINT)

ADDRESS: John A. Rahe, D.D.S.
204 Hillview Drive
Aurora, IN 47001

E-MAIL: joharrahe@comcast.net

COMMENTS:

- 1) BEGIN immediately ON WAL-MARK AND WILSON CREEK INTERSECTIONS.
- 2) SIX LANES ALONG CURRENT ROUTE IN LAWRENCEBURG FROM
ARGENT DRIVE TO NEW SR. 48 SEEMS LOGICAL AT THIS POINT IN TIME.

MONEY FROM toll road should help
IMMEDIATE ACTION!

(AN EXTRA WEST BOUND LANE FROM WILSON
CREEK TO GEORGE ST. SHOULD BE CONSIDERED
A GREAT OPPORTUNITY FOR ECONOMIC DEVELOPMENT
EXISTS IN THIS AREA, IF ROADS ARE IMPROVED.

SIGNATURE: John Rahe

From: Leslie Trobaugh
To: JFalls@doeanderson.com
Date: 10/20/2006 8:54:34 AM
Subject: Re: Fw: Corridor 50 Study Dearborn County

I am out of the office this week. I should be back on Monday, October 23rd.

If you have an immediate accounting need please contact Doris Green.

Leslie

>>> JFalls 10/20/06 08:53 >>>

Hey Leslie,

I spoke to Scott about this on Friday. Can you please e-mail me the powerpoint presentation from the PI meeting? Scott wants me to follow up with this gentleman and I don't have a copy of the powerpoint to go from since we gave all of our copies out at the meeting. I would like to pull the aerial of that intersection to e-mail to him, call him with specific issues, etc. If I have a copy of the powerpoint file, I can take care of him and have the resource for future inquiries.

Thanks a ton!

Jason

D O E A N D E R S O N

Jason Falls
Public Relations Account Manager
620 West Main Street
Louisville, KY 40202
502.815.3257 (p)
502.815.3557 (f)
502.435.9486 (m)
jfalls@doeanderson.com
<http://www.doeanderson.com>

----- Forwarded by Jason Falls/Louisville/DoeAnderson on 10/20/2006 08:51 AM -----

"Scott Roush" <Scott.Roush@Strand.com>
10/16/2006 08:23 AM

To
"Jason Falls" <JFalls@doeanderson.com>
cc
"Leslie Trobaugh" <Lesliet.COLPO.COLDom@Strand.com>

Subject
Fwd: FW: Corridor 50 Study Dearborn County

Jason, can you check into this and see if you can answer his questions from your end. Leslie is out this week. Let me know if you need my assistance. Scott.

Scott Roush
Strand Associates, Inc.
629 Washington Street
Columbus, IN 47202
1.812.372.9911
1.812.372.7190 fax
scott.roush@strand.com

>>> "Smith, Steve" <SSMITH@indot.IN.gov> 10/11/06 1:41 PM >>>
Scott---could the consultant team get back with Steve Eckart

Stephen C. Smith, AICP
Manager, Long-Range Transportation Planning Section
Indiana Department of Transportation (INDOT)
N901 100 North Senate Avenue
Indianapolis, IN 46204-2219
Voice: 317-232-5646
Fax: 317-234-1228

-----Original Message-----
From: Steven Eckart [mailto:steve29401@earthlink.net]
Sent: Friday, October 06, 2006 11:17 AM
To: Smith, Steve
Subject: Corridor 50 Study Dearborn County

I was unable to attend the Sept. 26 meeting, and would like to know how to obtain more information about the proposals presented there. I am mainly interested in the intersection of 275 and 50.

Thank you

Steven Eckart

Ameristop

440 Belleview Dr.

Greendale IN, 47025

From: Leslie Trobaugh
To: JFalls@doeanderson.com
Date: 11/16/2006 3:47:29 PM
Subject: Fwd: Letter Re US 50 Traffic

Hi Jason,

Scott asks if you could also send Mr. Faber a thank you

Leslie

Leslie Trobaugh
Environmental Specialist
Strand Associates, Inc.
629 Washington St.
Columbus, IN 47201

leslie.trobaugh@strand.com
812.372.9911

>>> Scott Roush 11/16/2006 3:27 PM >>>
Could you forward this to Jason and ask him to send a thank you?

>>> "Bill Miller" <BMILLER@oki.org> 11/16/06 2:43 PM >>>
Erin & Scott:

I received the attached letter earlier this afternoon via US Mail and pdf'd it FYI. I will mail Mr. Faber a thank-you and tell him that I've forwarded his comments on to the two studies' consultants.

--Bill Miller

OKI is a council of local governments, business organizations and community groups committed to developing collaborative strategies to improve the quality of life and the economic vitality of the region. - <http://www.oki.org>

Mr Miller

I drive US 50 Every morning M-F @ 5³⁰ AM
+ 5 pm from intersection of SR 350 to 275
so this stretch is my corridor.

I have not been to any meetings or know of other
inputs from travellers but here's mine.

Long term I believe some type of bypass is needed
but to increase flow here and now it's all in
the timing of traffic signals, most intersections
have sensors AND work OK. the problem is volume
at AM + PM Rushhours AND noon time Rush.

Stepped timer programs would increase flow
reduce back-ups AND control speed limits.

Example

Between 5A + 8A signals would be in "high flow mode"

8A + 11³⁰ normal sensor

11³¹ - 1 pm high flow

1 pm - 3³⁰ normal sensor

3³⁰ - 6³⁰ high flow mode

Also my experience has been if lights are timed to
respond at certain mph and drivers are informed the
proper speed is maintained, downtown Lexington Ky is a good
example of speed sensitive traffic signals.

The light at George st will stop US 50 flow if a
car turning left from west bound drives over the sensor
Walmart light will change without a single car to let thru
then won't move quickly back to 50 flow, the new lite @
50 + Hospital Bypass by CAR WASH also changes without need
Both Argosy lites (Entrance + Parking Lot) favor patrons

The light from 275 onto 50 W is very well timed flow is good but stops at the levee where downtown Liburg lites ARE so unfriendly to flow its easy to see why the problem is escalating out of control.

We need A short term fix without major construction getting thru the 7 mile stretch of lites from 275 thru Aurora is the "Battle Zone" once past the 350 interchange the roads open up.

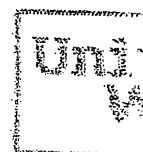
Heavy Vehicles, Dumptrucks, RV, 18 wheels + others, should be in the right lane only unless turning left this also ties up progress AND slows over all flow

Most Drivers ARE courteous AND allow movement back + forth Traffic signs inform AND calm, more information is needed like the name of next intersections coming up, courtesy reminders, Right turn lanes allowed to proceed when safe, Right lane for slower traffic

Steve Faber
13238 Shawnee Dr
Aurora IN 47001

CINCINNATI OH 452

15 NOV 2006 PM 6 L



Mr Miller OKI
720 Pete Roseway
Cincinnati OH
45202

APPENDIX E
THIRD COMMUNITY ADVISORY COMMITTEE AND PUBLIC
INFORMATION MEETING MINUTES AND COMMENTS (APRIL 2006)

MEMORANDUM

- | |
|--|
| <input type="checkbox"/> Information Only |
| <input type="checkbox"/> Project Specific |
| <input type="checkbox"/> Policy Memo - File With |

TO: File
FROM: Leslie Trobaugh/Scott Roush, Strand Associates, Inc.
DATE: April 24, 2007
RE: INDOT US 50 Corridor Planning Study and Environmental Assessment

This date a meeting was held at the Adult Learning Center, 311 West Tate Street, Lawrenceburg, Indiana from 3:00 – 5:00 with the **Community Advisory Committee (CAC)** to discuss the culmination of the US 50 Corridor Study and the Draft US 50 Corridor Planning Study Report. This was the third of three meetings that are required by Indiana's Streamlined EIS Procedures.

The meeting began with a Power Point presentation by Bruce Rape. The development of the report and its various components was discussed, including the Existing Conditions Report, Purpose and Need Statement, Alternatives Discussion and Selection, and Recommendations for Further Study. After the presentation the floor was opened for comments and questions.

- Question: Alternative 6 looks like it would either eliminate the fairgrounds or take out the athletic fields at the high school. The fairgrounds need to remain – it's the only place that some events can be held & is very important to the community. If the new road were built on the high school side where would the athletic fields move?
Answer: The alignment is not set – the road could potentially go on either side of the levee, although it is more likely that it would run on the fairgrounds side. There are geometric features that might dictate which side would be selected.
- Question: US 50 & Sunnyside is very congested & there are a lot of accidents. There doesn't seem to be any alternative that would do anything to fix the problem there.
Answer: The Existing Conditions Report examined the corridor & although there may be some congestion there, the traffic modeling did not show failure.
- Question: Did the study go over to the Ohio state line?
Answer: No, our study terminated at the I-275/Bellview/US 50 interchange. The Gateway Study done by ME Companies did extend to the state line. Their study was to look at access control, developing standard land use, etc.
- Question: how soon will anything happen?

Answer: INDOT has undergone a complete reorganization in the past year. Major funding is now coming through the Major Moves program. In order for a project to be funded by the state it must first be programmed into the State Transportation Plan. The earliest date for programming would be 2008. All potential projects have to go through a rating process. Each program receives points for items such as cost, need, the amount of money that the local agency will provide, etc. Try to structure your project to be attractive, such as getting property owners to donate right-of-way. You are competing with every other county in the state and there is much more need than there are dollars to solve the problem. All projects in the whole state are competing against each other. INDOT Central Office funds are now allocated through 2015.

- Question: What can we do to help get our projects funded?

Answer: Keep up active communication with INDOT, attend the public meetings that INDOT has to discuss future needs so that you can continually keep your projects in the forefront.

There is a collaborative group that has formed out of the OKI/Gateway Study. Use this group to advocate for the solutions you would like to see for the corridor, both from the Gateway Study and from this study.

In addition to the Major Moves program, the INDOT district offices also have programs that can provide funding for projects like intersection improvements. Right now the Seymour District has obligated funding through 2013.

- Question: A bridge from Petersburg KY to Aurora would cure the problem.

Answer: A bridge from Aurora to Kentucky was an alternative that was discarded. The high costs associated with constructing a new bridge over the Ohio River, along with the current financial constraints of the State of Kentucky eliminated it from being considered further. It was also anticipated that there could be significant environmental impacts as well. Even if a bridge were built, there would still have to be a new road built on the Kentucky side that would connect to I275, which would also be a high dollar project.

The meeting concluded with the CAC members present being advised of the date of the final Public Hearing, which would be on Monday, April 30th at 6 p.m. at Lawrenceburg High School.

Attendees:

[Initials]S:\@SIECO\051--100\060\078\Wrd\Env\CAC-SAG\04-24-07 CAC.doc\092407



CAC Members

Anita Benning (for Peter Resnick), Dearborn County Hospital
Bill Black, Jr., Dearborn County Emergency Management
Doug Hendrick, City of Greendale
Jennifer Hughes, Dearborn County Soil & Water Conservation District
Jeff Hughes, Dearborn County District 1
LaVerne Kolb, Farm Bureau, Inc.
Steven Lampert, City of Greendale
Mark McCormack, Dearborn County Planning & Zoning
Chris Mueller, County Metro Planning Board
John Rahe, Main Street Aurora
Michael Rozow, Dearborn County Chamber
Tom Steidel, City of Lawrenceburg
Ralph Thompson, Dearborn County Commissioner
Jim West, Dearborn County Economic Development

INDOT Representatives

Pankaj Desai
Frank Baukert

FHWA Representative

Larry Heil

Gateway Study Representatives

Erin Peterson, ME Companies
Bill Miller, OKI

Corridor Study Representatives

Bruce Rape, Strand Associates
Scott Roush, Strand Associates
Leslie Trobaugh, Strand Associates
Jason Falls, DOE Anderson

- ☐ Information Only
- ☐ Project Specific
- ☐ Policy Memo - File With

MEMORANDUM

TO: File
FROM: Leslie Trobaugh/Scott Roush, Strand Associates, Inc.
DATE: April 30, 2007
RE: INDOT US 50 Corridor Planning Study and Environmental Assessment
CC: Jason Falls, Doe Anderson

This date a public information meeting was held at the Lawrenceburg High School, in Lawrenceburg, IN. Representing INDOT: Mary Jackman, Frank Baukert, Marvin Jenkins, Jim Ude; Strand Associates: Bruce Rape, Scott Roush, Leslie Trobaugh; Doe Anderson: Jason Falls

Public information meetings are held to create an informal opportunity for local residents to participate in the process of implementing projects that affect their communities. This meeting is the third and final public information for the US 50 Dearborn County Corridor Study.

Mary Jackman briefly explained the comment process and the agenda for the evening. Bruce Rape then summarized the draft Corridor Study Report that has been developed. The report examines current conditions of the corridor, provides traffic modeling data to extrapolate future traffic levels of service, evaluates various alternatives that could potentially improve the functionality of the corridor, and establishes which alternatives should be advanced for more in depth study as projects of independent utility.

At the conclusion of the presentation and prior to the question and answer period, the floor was opened to anyone who wished to make a statement for the record. These statements will become part of the official transcript. A representative selection of questions/responses following the statements of record follows:

- Strand Associates – before we get in to the question & answer period we do want to state that our challenge was to evaluate where problem areas existed along the corridor, how did the corridor function currently, predict how the problem areas would function in the future and how the current roadway would function if nothing was done. None of the selected alternatives are set in stone. These alternatives will be evaluated in greater detail; the in depth assessment of impacts has not yet been done.
- Question: You have three options for Lawrenceburg, will all of these be done? Response: No, we have identified three alternatives which fulfill purpose and need for that segment of the corridor, but only one of these three would ultimately be advanced as an actual project.

- Question: What is next? Response: Some of the suggested improvements are minor such as the access management solutions, while the alternatives that have added travel lanes are major projects. INDOT prioritizes projects on need and available funding. Our funding is limited. Smaller fixes could be funded from other “pots of money” such as those funds available from the district funds. Long range planning funds are for new roads and major road reconstructions and these types of projects have the longest lead times. A minor project could be accomplished in a few years, a major project would take a minimum of eight to ten years. A project started right now would most likely be constructed in the year 2018. The projects that will be advanced for further evaluation from this study will now go through the rating process by INDOT. These projects will be compared and evaluated to all of the other projects in the state that are also trying to get funded. The highest scoring projects get funded first. Right now Major Moves projects are funded out to 2016. If one of these projects gets funded then most likely environmental studies would begin in 2010 and construction would begin in 2020.
- Question: It seems that traffic would be worse if you stop left turns. Answer: Impacts do have to be examined, both to businesses and side streets. The State would have to consider the impacts and make a decision if these impacts outweigh the benefit that might be derived from the implementation of a solution like no left turns or barrier medians.
- Question: Some of these solutions like barrier medians and forbidding left turns would really hurt the businesses along US 50. Answer: In the end it may also just be a trade-off. How much business are you losing just because the congestion is so bad that many potential customers just completely avoid the area? We do look at the impacts – can we mitigate for any problems, is the mitigation economically feasible? Ultimately it may come down to which situation are you willing to live with? Restrictions on traffic movement or unlimited movement but high congestion?
- Question: Has there been recent work exploring a bypass? Answer: We examined bypass alternatives, but traffic modeling indicated that not enough vehicles would transfer to a bypass to relieve the congestion. Only five to seven thousand vehicles per day would utilize a bypass which would not provide enough relief to the corridor. The SR 48 to SR 1 connector project remains a valid local project. It could be a local project worthy of being constructed for reasons not related to our study.
- Question: When will we know if any of these projects will get funded? Answer: It depends upon the type of project. A big ticket project can take one and a half to two years to get listed. Smaller projects could be put on the list in a year. The INDOT website does list the Major Moves projects that are listed for the next ten years.
- Question: Barrier medians will really hurt the response time for ambulances. How will they get through if they can’t turn left? Answer: Before implementing a no left turn policy or constructing barrier medians the State would bring in emergency workers to get their input on where breaks need to be constructed for emergency vehicles.
- Question: Most of the traffic is from 6:30 to 8:30 in the morning and 4:30 to 6:30 in the evening. Why not allow an addition lane east in the morning and west in the evening. Answer: This was one of the alternatives we looked at. There were concerns about functionality and driver confusion. We may re-evaluate this alternate as a short term solution. We would also look at just doing restrictions on left hand turning movements during the peak times.

- Question: We have a business that is on leased property. We get no notifications of these hearings because we aren't the owners of the property. Answer: At this stage there is no individual notification to property owners of meetings. INDOT will list public meeting dates on their website. Public meetings will also be advertised in local papers as well as other media. Although this concludes the public information process for this corridor study, there will be future opportunities to be involved if and when selected alternatives are advanced for further study.

U.S. 50 CORRIDOR STUDY

COMMUNITY ADVISORY COMMITTEE

John A. Rahe, D.D.S.
204 Hillview Drive
Aurora, IN 47001

John A. Rahe, D.D.S.
204 Hillview Drive
Aurora, IN 47001

MEETING NOTES

Name: _____

Organization/Representing: MAIN STREET AURORA & DEARBORN COUNTY REDEVELOPMENT COMMITTEE

Contact Information: 812-926-2826 AND John A. Rahe, D.D.S.
204 Hillview Drive
Aurora, IN 47001

An additional west bound lane is NECESSARY BETWEEN SR 148 AND GEORGE ST. in AURORA. This section has the second highest Traffic count throughout the whole U.S. 50 corridor. It backs up EXCESSIVELY almost EVERY AFTERNOON RUSH HOUR — both west bound traffic AND traffic turning left on SR 148. I am shocked that your studies did NOT recognize the problem. Both traffic flows for the two (SR 148 & GEORGE ST.) left turns share a common traffic lane. A third lane would allow each turn to have a full lane for the relatively short distance between SR 148 and GEORGE ST.

PREVIOUSLY I HAVE recommended a pedestrian & bicycle trail under the ~~HOAN~~ CREEK Bridge so that nonvehicular Traffic could ACCESS downtown AURORA. U.S. 50 is a tremendous impediment to pedestrian movement compared to the time before US 50 bisected or sliced AURORA so dramatically.

(This is NOT A recommendation for an overpass at SR 148 which would not facilitate pedestrian traffic to downtown AURORA)

Please mail or fax completed form to:

Leslie Trobaugh
Strand Associates, Inc.
629 Washington Street
Columbus, IN 47201

email: leslie.trobaugh@strand.com
phone: 812-372-9911
fax: 812-372-7190

U.S. 50 CORRIDOR STUDY

COMMUNITY ADVISORY COMMITTEE

MEETING NOTES

Name: Steve Lampert

Organization/Representing: City of Greendale

Contact Information: 812 537 2125

510 Ridge Ave Greendale IL 47025

① Bellview is critical to the function of I275 - US 50. Needs to be addressed. Heavy Traffic (Truck) use SR #1 (Bellview) off I275.

② Please consider ~~I275~~ I275 interchange at Stevens Road at State Line Road + Stevens Road. Ohio + Indiana State Line. Would really help out. Dearborn County is planning a lot of growth off State Line Road.

Please mail or fax completed form to:

Leslie Trobaugh
Strand Associates, Inc.
629 Washington Street
Columbus, IN 47201

email: leslie.trobaugh@strand.com
phone: 812-372-9911

fax: 812-372-7190

Trobaugh, Leslie

From: SEAN FURLOW [swfurlow@verizon.net]
Sent: Thursday, May 03, 2007 8:54 PM
To: Trobaugh, Leslie
Subject: US 50 Improvements

There are a large number of educated professionals who are cut off from taking jobs in Cincinnati and Northern Kentucky simply because of the traffic issues between Aurora and I-275. I made the drive to Cincinnati for a period of time from Versailles. The congestion between Aurora and I-275 added at least 30 minutes each way to my commute – an extra hour a day spent waiting in traffic to travel 3 miles.

The congestion also cuts off potential educational opportunities in Cincinnati and Northern Kentucky because of the added time lost.

As a family, we have stopped shopping in Dearborn county and traveling to Cincinnati and Northern Kentucky. We now go south to Louisville or North to Indianapolis.

Trobaugh, Leslie

From: Aesthetic Solutions [aestheticsolutions@wildblue.net]
Sent: Friday, May 04, 2007 12:53 PM
To: Trobaugh, Leslie
Subject: US 50 Improvement

I want to voice my opinion for the evaluation of the US 50 improvement. I wasn't aware of a meeting so, of course, I wasn't there. The newspaper says they've determined this unnecessary since the amount of traffic entering from Ripley County to Dearborn County is "insignificant". That would be because, for years, we've all gone out of our way to avoid the bottleneck from Aurora to I275 by going to Sunman via 101 then 74 to Cincinnati or Kentucky. This adds quite a few miles but avoids the horrible messes that are so common from Aurora to I275. My husband and I both travel this route almost daily to avoid it!

APPENDIX F
PROJECT MANAGEMENT TEAM AND
OTHER COORDINATION MEETING MINUTES

MEMORANDUM

- ☐ Information Only
- ☐ Project Specific
- ☐ Policy Memo - File With

TO: File
FROM: Scott Roush, Strand Associates, Inc.
DATE: November 23, 2005
RE: INDOT US 50 Corridor Planning Study and Environmental Assessment

This date a meeting was held at the INDOT Seymour District with representatives of Dearborn County to discuss opportunities to coordinate the activities of the INDOT US 50 Corridor Study and the OKI/Dearborn County Gateway Study.

Attending:

INDOT	Steve Smith, Frank Baukert, Jim Ude (Seymour District)
ME Companies	Erin Peterson, Michael Ciotola (will primarily deal with OKI)
Dearborn County	Travis Miller
Strand Associates	Scott Roush, Leslie Trobaugh

Travis: Goal is to eliminate duplication between the Corridor Study & the Gateway Project and to coordinate the two studies. Want Gateway to supplement the Corridor Study.

Consensus: public will not distinguish between the two studies. We need to have good communication with each other.

Discussion ensued re the potential new bridge over Tanners Creek. INDOT has encouraged a design/build approach. No location has actually been selected. American Consulting Engineers is doing a 30 day feasibility study for the City of Lawrenceburg & should have results in January. Issues with railroad & new lift station. If a parallel bridge is feasible then City will move forward. If a parallel bridge is not feasible then location decision will default to ME. If ME is not involved in bridge location then their contract will be expanded to include more time on US 50 land use.

Steve: successful coordination of the two projects would benefit from Strand participation in the Gateway Study by attending the Project Management Team (PMT) meetings for that project.

Discussion re how to accomplish attendance given that Strand does not have a budget within the existing INDOT agreement for these meetings. Scott will provide a fee for attending meetings to Travis.

Scott: discussion of Strand scope for Corridor Study: Data collection will begin 11/28 on turning movements and existing access. Crash data will also be gathered. Travis indicates that he may have some data. Data collection should be complete within 1 month & will start building operational model that will identify safety issues, functional analysis of sections.

Travis: Dearborn County has GIS info – may be more extensive than info INDOT has.

Scott: Strand will also develop preliminary Purpose & Need – coordinating with INDOT & FHWA. Public involvement including the CAC, public information meetings. Also local Study Advisory Group (SAG) (elected/appointed officials), Resource Agency Meetings, Once Purpose & Need developed, it will not be revisited.

Steve: We should wait for first Public Information (PI) meetings until have some data – i.e. safety info

Scott: We will look at short term & long term improvements, impacts/solutions. then alternative analysis. Four segments to be evaluated including:

- I-275 to east side of Lawrenceburg
- East side of Lawrenceburg to west side of Lawrenceburg (SR48)
- West side of Lawrenceburg (SR48) to Aurora (SR56)
- Aurora (SR56) to Dillsboro (SR 62)

Certain number of alternatives will be evaluated within each section.

Travis: development already taking place in Dillsboro segment.

Steve: Operational model - 2 sections primarily. Lawrenceburg and Lawrenceburg to Aurora

Erin: ME would want to use some of Strand data on existing conditions for their look at access management. Access management will be primary focus of Gateway Study.

Steve: INDOT has permitting/access mgmt. guidelines (may not be on-line yet) will send ME drawings (GIS format)

Scott: ME would like a copy of existing conditions report when it is completed.

Steve: Indiana's geological website has GIS info on Lawrenceburg – county level info. Also has photo log (pavement info).

Travis: Dearborn County has copy of photo log. June, 2003.

Erin: ME would like copy of access inventory. Strand to contact Erin with details.

Erin: ME will be doing a business survey – will ask questions such as how existing conditions affects the business.

Travis: County wants to develop a focused access management plan.

Steve: Possible that CMAQ funds could be used to fund an access study due to the fact that Lawrenceburg is a non-attainment area. Would look at Lawrenceburg Township.

Travis: Wants access management plan to be consistent with regulations from each jurisdiction

Erin: Will be looking at existing land use (a portion will be funded later). Look at key development sites (5-8). What is highest/best use.

Travis: The Economic Development group will be working with ME on this

Erin: ME will have 2 workshops (actually 1 workshop, but will be divided into 2 sections. First will lay out existing conditions on land use & access management. 2nd will break into groups to provide vision for the corridor & look at the key development sites.
After concluded will make presentation to councils.

Travis: Could this workshop be combined with one of Strand's public information meetings.

Erin: ME could be present at the 1st PI meeting for Purpose and Need & at that time make short presentation on the land use workshop & ask for interested persons to contact ME.

Steve: we want to look at the target audience. SAG's seen as intimidating because of officials involved. Not sure of what the workshop target audience is. Are there community groups along the US 50 corridor? It appears that SAG and local PMT could have common membership. Local PMT will be meeting 6 times over 9 months. INDOT PMT is 3 times over 18 months.

Erin: ME will be sending out letters inviting participation in the workshop

Steve: We need to have some common staff at all meetings. Want to look at presenting a common image. ME is willing to attend PI meetings.

Again discussed need for Strand to participate – could even include Wilbur Smith

Erin: Asked when Strand would complete driveway assessment & the environmental studies.

Scott: Environmental studies will not be done until much further along in project.

Driveway assessment – need to check scope of work.. It is hoped that access points will be on GIS format – if we can find appropriate GIS mapping.

Turning movements will be completed within the next two weeks.

Erin: Strand will provide a copy of project schedule to Erin as soon as it is ready.

Steve: INDOT has a CD of environmental “impacts” for the area. Frank will send to ME & to Strand

Travis: Can we get an idea as to when the first PI meeting will take place

Consensus was that March or April was target for 1st public information meeting. - possibly at high school?

Steve: wants ME to let Wilbur Smith and Doe Anderson (DA) know when business survey sent

Travis: wants another coordination meeting to continue to keep everyone on same path & also to look at the results of the business survey.

Also noted that the Dearborn County Comprehensive Plan is on .pdf on website

MEMORANDUM

- | |
|--|
| <input type="checkbox"/> Information Only |
| <input type="checkbox"/> Project Specific |
| <input type="checkbox"/> Policy Memo - File With |

TO: File
FROM: Scott Roush, Strand Associates, Inc.
DATE: April 11, 2006
RE: INDOT US 50 Corridor Planning Study and Environmental Assessment

This date a meeting was held at the INDOT Central Office with representatives of the Project Coordination Team (PCT) to discuss the Purpose and Need of the project. This is the first of three meetings that are required by Indiana's Streamlined EIS Procedures.

A list of those attending and a copy of the meeting agenda is attached.

A brief introduction was given by Steve Smith and then Scott Roush summarized the history of the project.

Jeff Held then proceeded with a summary of the Draft Existing Conditions Report and the Draft Purpose and Need Statement. The following was discussed:

- The traffic modeling will be capacity constrained. The modeling needs to include trucks in the composition of traffic. Attempt to identify local versus through traffic. OKI may have some origin-destination information that will be useful.
- The parallel Tanners Creek bridge project study being completed by the City of Lawrenceburg is in the OKI long range plan and an air quality conformance has been completed. For purposes of the travel demand model it should be considered a committed project. The Tanners Creek bridge is considered a project of independent utility.
- The discussion the OKI 2030 Regional Transportation Plan in Section 4 of the report needs to include discussion of the February 2006 amendment.
- Section 5 of the Existing Conditions Report needs to include local committed projects. This information will be coordinated with OKI.
- A discussion of the Gateway project will be included in the Existing Conditions Report.
- With the addition of committed projects, both the Existing Conditions Report and the Purpose and Need Statement are ready to be posted on the web site and forwarded to the Resource Agencies.

The discussion then proceeded to the public involvement process. Kristen Jordan summarized the efforts to identify the Community Advisory Committee membership and how notification will be handled for the Public Information meeting. The following was discussed:

- The Community Advisory Committee meeting will be held on April 18, 2006 at the Dearborn Adult Center, 311 West Tate Street, Lawrenceburg, Indiana from 3:00-5:00 pm.
- The Public Involvement meeting will be held on April 25, 2006 at Lawrenceburg High School, 100 Tiger Boulevard, Lawrenceburg, Indiana from 6:00-8:00 pm.
- The format of the meetings will be an introduction by Mary Jackman of INDOT followed by a brief presentation by Scott Roush. This will be followed by a question and answer session. At the conclusion of the question and answer session there will be an opportunity for attendees to meet with project representatives to continue discussions. Copies of the Resource Map will be available to facilitate these discussions. The meetings will then adjourn.
- At the Public Involvement meeting people should be encouraged to participate in the CAC process.
- We should attempt to identify Consulting Parties as part of the Section 106 process and invite them to participate as CAC members and to attend the Public Information meetings.
- The Gateway Study will be included in the presentation and there will be an opportunity to meet with Gateway representatives during the informal session.

MINUTES
Review of Preliminary Alternatives
Thursday, July 13, 2006
2:30 P.M., IGCN, Rm. N801

INDOT US 50
Corridor Planning Study and Environmental Assessment

Attendees:

Chris Andrews	INDOT Division of Environmental Services
Steve Smith	INDOT Division of Urban and Corridor Planning
Dave Butts	INDOT Division of Urban and Corridor Planning
Frank Baukert	INDOT Division of Urban and Corridor Planning
Dan Buck	INDOT Division of Urban and Corridor Planning
Dave Hunter	Wilbur Smith Associates
Scott Roush	Strand Associates, Inc.
Marc Rape	Strand Associates, Inc.

The purpose of the meeting was to discuss the preliminary alternatives that Strand and Wilbur Smith have been developing for the US50 corridor. Scott opened with a brief discussion of the project milestones that had been completed to date, which included the first CAC and Public Information meetings taking place in Lawrenceburg.

Dave Hunter said that Wilbur Smith has been working on the Travel Demand Modeling. He needs to know if the Memo of Understanding with OKI has been signed yet. Steve to check on that after the meeting.

Steve is very interested in seeing the model fine-tuned before we get too far into the study.

Dave Butts added that INDOT executive staff has accepted the City of Lawrenceburg's proposed parallel bridge over Tanner's Creek. Steve Smith said that since that is now a committed project the alternatives need to consider that the bridge is in place.

Scott had met with Steve three weeks prior to show the six alternatives that Strand was considering. At Steve's suggestion, four additional alternatives have been added. Scott then gave a detailed presentation summarizing each of the ten alternatives. Positives and negatives, including rough LOS impacts, construction costs and probable environmental impacts were discussed for each alternate. Marc pointed out that construction costs did not include right-of-way, engineering, or relocation costs, which could vary significantly.

Questions/Discussion During Alternatives Presentation:

- Will Alt. 3 (Reversible Lanes) increase LOS? Strand will have better data prior to next meeting.
- The aerial photograph needs to be updated prior to next meeting.
- Alt. 5 will be redrawn to minimize impacts to Lawrenceburg High School.
- With the closing of Seagram's, Alt. 6 may be more attractive, easier to sell.
- With Alt. 6 (and all one-way pairs) need to include access to downtown as consideration.
- Alt. 10 – construction cost estimate seems low. Strand to re-evaluate prior to next meeting.
- Steve Smith suggested that all construction costs be projected out +/- 10 years to present accurate costs when likely to be built.
- Steve also recommended that one-way pair alternates be revised to reflect Tanner's Creek bridge.

Dave Hunter then gave a brief discussion of Wilbur Smith's suggested options between Lawrenceburg and Aurora. The short-term alternative is to close the center median (concrete median barrier) and only allow left turns at the signalized intersections. Dave suggested that vehicles in the through lanes slowing to turn left are a significant cause of the congestion west of Lawrenceburg. Wilbur Smith's proposed longer-term solution is the construction of frontage roads parallel to US 50 for access to local properties, again limiting left turns.

Scott asked at what point alternatives could begin to be eliminated. Steve said nothing should be eliminated until the LOS / safety impacts of each alternative has been reviewed. He expects to see that info at the next meeting.

Dave Butts suggested as a general reminder that all options need to consider connections to local streets.

Steve Smith added that more detail regarding SR 1 needs to be included in the alternates that directly affect SR 1.

Frank Baukert questioned if improving SR 1 from Nowlin Avenue to US 50 would help with the capacity on US 50. Scott said that the traffic study conducted for Alt. 8 & 9

indicate that 5,000 to 6,000 vehicles would utilize the proposed alignment, which is not enough for an appreciable difference on US 50.

The next meeting date was set for [REDACTED] on August 8th. The meeting was adjourned at 4:00. These are the minutes of the meeting as we understand them. Please contact this office with any concerns or comments.

cc: all attendees

MEMORANDUM

- ☐ Information Only
- ☐ Project Specific
- ☐ Policy Memo - File With

TO: File
FROM: L. Trobaugh/S. Roush/Jeff Held
DATE: September 5, 2006
RE: US 50 Corridor Study Project Team Meeting - Alternatives Review

This date a meeting was held at the INDOT offices in Indianapolis. A list of attendees appears at the end of this document. The purpose of the meeting was to review alternatives developed by Strand Associates for the US 50 Corridor Study. ME Companies also presented a brief overview of the Gateway Study developments to date.

After introductions, Scott Roush from Strand explained that the alternatives that have been developed primarily focus on the Lawrenceburg area, as that is the major area of the corridor experiencing congestion. The segment from Aurora to Lawrenceburg does have a higher than average accident rate. Both this area & the Dillsboro to Aurora segment would benefit from access control.

Jeff Held then presented the following alternatives:

#1 On-Alignment Capacity Expansion (Estimated construction costs \$4.5 million)

Expand US 50 from 4 lanes to 6 lanes in the downtown Lawrenceburg area.

Major impacts to the north side of US 50 (which include the historic district), new r/w of approximately 4 acres & 10 to 15 relocations. Since the Tanner's Creek Bridge is now a committed project, some of the impacts to the historic district & the number of relocations would be lessened, since the bridge project will be done first. However, to operate effectively, road would require 3 thru lanes, plus dual lefts & exclusive rights at major intersections (end result 8-9 lanes).

Question: Why not move south for the additional lanes?

Answer: Major reason is that a city park would then be impacted. Would still also require relocations, and geometrically would not transition well to curve at Arch Street.

General recommendation was that this alternative be advanced for further consideration.

#2 No Left-Turns Allowed in Downtown Lawrenceburg (Construction costs \$90,000)

Creates 2-phase signals. Left turns are prohibited, traffic circles the block to complete the movement. Minimal impacts and can be implemented quickly. Not sufficient to improve operations to LOS D or better for all movements based on 1.4% growth per year. Significant queuing is anticipated on side roads. Main & Front streets are main problems through Lawrenceburg in terms of capacity. Arch Street

has experienced a higher than average crash rate. Next major problem area on US 50 is the I-275 intersection.

Could be set up to restrict left turns only during peak hours. Some left turn restrictions are proposed as part of the new Tanner's Creel Bridge project.

Question: If we don't have modeling then how can we discuss amount of improvement to LOS?

Answer: We have found that the growth factor predicted in the operations model is confirmed by the Travel Demand Model. Operations modeling of future conditions under this scenario indicates that significant congestion (LOS E operations) and queuing may occur on the side streets.

Question: If a left-turn restriction will already be implemented by the new bridge project, how can we get the Main & Front area to LOS D or better?

Answer: Additional through lanes on US 50 would probably be required, which is considered in Alternative 1.

General recommendation was that this alternative be discarded because it does not adequately relieve congestion. Could be considered as an interim or short-term solution.

#3 Reversible Lanes in Downtown Lawrenceburg (Estimated construction cost \$1.7 million)

3 lanes in peak direction during peak hours, 2 lanes in opposite direction, left turns prohibited.

Minimal impacts – would require 5-10 relocations and approximately 1.2 acres of new r/w & still require widening.

Comment: Reversible lanes have been used & abandoned in Cincinnati – have not achieved the needed capacity.

Comment: The issue of timing is also relevant – people knowing when to use a lane & when it's restricted.

Comment: Although Indianapolis has an example in Fall Creek Parkway, it's intimidating for out-of-town drivers. Are all the other drivers going to follow the lane restrictions?

Comment: It becomes a safety concern. This alternative does not appear to meet the purpose and need of the project. We need to make sure that the public understands why this alternative is discarded.

General recommendation was that this alternative be discarded because it will likely be difficult to implement and may not achieve the necessary capacity to fully relieve future congestion.

#4 One-Way Pair – South (Estimated construction cost \$28 million)

3-lane one-way streets with short turn lanes at intersections. Provides acceptable operations. Requires significant new roadway & local street reconfiguration.

Impacts historic district south of US 50. Would require approximately 20 acres of new r/w, including 3 acres of wetlands, as well as 30-40 relocations.

The benefit of the new Tanners Creek bridge would be diminished.

General recommendation was that this alternative be discarded due to the high impacts relative to the other alternatives.

#5 One-Way Pair – Near North (Estimated construction cost \$4.1 million)

3-lane one-way streets with short turn lanes at intersections. Provides acceptable operations west of the high school. Ties into the new bridge. Fewer impacts than Alternative 4.

Approximately 1.5 acres of new r/w including .3 acres of wetlands & 4-5 relocations.

If US 50 is widened, then this alternative becomes less attractive.

Comment: Looks like a reasonable alternative & should be advanced. Could still allow left turns.

Question: Is it feasible to get back to US 50 quicker to avoid the wetland & high school?

Answer: Will require a more detailed evaluation. **Strand** to investigate.

General recommendation was that this alternative be moved forward.

#6 One-Way Pair – Mid North (Estimated construction cost \$7 million)

3-lane one-way streets with short turn lanes at intersections. Provides acceptable LOS. Less impacts than Alternative 4. Will require crossing the levee.

Would require approximately 6.2 acres of new r/w & 5-10 relocations.

Question: What about going through the tanks?

Answer: The plant is closed at this time.

Less intrusive on the historic district & is a mixture of commercial & residential.

General recommendation was that this alternative be moved forward.

#7 One-Way Pair – Far North (Estimated construction cost \$34 million)

3-lane one-way streets with short turn lanes at intersections. Overall length & separation would require construction of connector streets. Impacts Greendale Historic District.

Approximately 16.5 acres of new r/w, including 1.2 acres of wetland. 30-40 relocations.

Response: Would most likely be archaeological problems with using Ridge Road as well as the many historic homes on that road.

General recommendation was that this alternative be discarded due to the high impacts and costs relative to the other alternatives.

#8 SR 1 to SR 48 Connector – Nowlin Ave. (Estimated construction cost \$32 million)

Provides alternative route & additional Tanner's Creek crossing. Will not draw enough traffic to greatly improve LOS on US 50.

Would require approximately 70 acres of new r/w, including .6 acres of wetland & 5-10 relocations.

Comment: At one time this was a committed project

Comment: There was never a consensus of support from the area residents

Comment: Is not in the OKI TIP

General recommendation was that this alternative be discarded due to the uncertainty of its implementation and the fact that it does not adequately relieve congestion on US 50.

#9 SR 1 TO SR 48 Connector -Indiana Glass (Estimated construction cost \$36 million)
Provides alternative route & additional Tanner's Creek crossing. Will not draw enough traffic to greatly improve LOS on US 50.
Would require approximately 71 acres of new r/w, including .6 acres of wetland and 5-10 relocations.

General recommendation was that this alternative be discarded due to the uncertainty of its implementation and the fact that it does not adequately relieve congestion on US 50.

#10 New Ohio River Bridge (Estimated construction cost \$400 million)
Connects US 50 to I-275 via KY SR 20. 7 miles of new 4-lane roadway & 4,400' bridge.
Significant riparian impacts.
Approximately 120 acres of new r/w, including 7-8 acres of wetland, and 45-50 relocations.
This alternative was developed from suggestions from public involvement via CAC & Public Information meetings.
Question: How can we develop a new road in Kentucky?
Answer: There have been projects done in an interstate partnership.
Comment: Normal revenue stream would not allow this to move forward.
Comment: This concept was presented to provide a full range of alternatives.
Comment: **Wilbur Smith** will put a link in the future conditions demand model to determine if this crossing would significantly relieve US 50.

General recommendation was that this alternative be discarded due to the difficulty of construction, likely environmental issues and the difficulty in funding such a massive project.

Intersection Improvement – US 50 at Wilson Creek Road (Estimated construction cost \$9 million)
New or widened structure over Wilson Creek needed. Provides dual left-turn lanes from Wilson Creek and US 50. Provides exclusive right turns from Wilson Creek Road and US 50.
Wilson Creek Road is a major route to the hospital.
Would require approximately 2.5 acres of new r/w and affect around 30 parking spaces.
Comment: This area has been brought up repeatedly as a problem by the Mayor of Aurora.
Question: Would access control and in-place intersection expansion be a better alternative than a new entrance?
Response: There are many entrances in & out. Utilizing the road behind the businesses & controlling access from US 50 is part of the Gateway study.
Comment: This alternative shows communication between the 2 studies.

General recommendation that **Strand** further investigate improvements at this location.

Discussion after presentation

Question: Are we obligated to present all of the alternatives to resource agencies?
Answer: Yes, but we can recommend which we think should move ahead in the study.
Comment: We need to let the public know that we have heard their suggestions.
Comment: Costs are way too low. A factor of 2 to 3 should be used for all amounts.

Answer: The figures do not represent the costs for acquiring r/w or relocation costs, design costs, etc.

Rob Bostrom, from Wilbur Smith Associates briefly discussed Travel Demand Modeling:

Question: What Travel Demand Model is being used – INDOT or OKI?

Answer: The OKI model is being used – has more density & more roads. The OKI model also has more in depth focus on the Dearborn County area, although both models provided relatively the same figures.

Question: How can we say an alternative is reasonable or not when we don't have more environmental information?

Answer: Several of the alternatives will require significant impacts and/or cost to implement. If there are alternatives that will accomplish the same traffic relief objectives but at a lower cost and impact, the objective is to narrow the number of feasible alternatives to be advanced for more detailed study.

Question: Should Alternative 2 even be presented?

Answer: Part of the scope was to provide both long term & short term alternatives. Alternative 2 was investigated to determine if it could meet future US 50 needs, instead it appears that it would provide a short term/low cost concept that could be implemented in advance of longer term, more capital intensive permanent solutions.

Gateway Presentation by Erin Peterson:

The study looks at access management and land use along the US 50 Corridor.

There are over 400 access points along the corridor with some stretches having 60-80 access points per mile. There is no curb & many businesses have their pavement areas run right to US 50.

Gateway Study will have 4 advisory committee meetings – a combination of elected officials, business owners, etc.

In general, access points should be 350 feet apart & the functional area of the intersections should be protected (700 feet at signals).

Raised medians, right-in right-out are also possible solutions along with limiting access.

There are a huge number of accesses (and therefore, conflict points) on US 50. Traffic is about 25% truck traffic and is currently 42,000 vpd.

ME met with some Argosy Casino staff. A public-private partnership may be possible to address some issues. Argosy will be constructing a new parking garage.

Attendees:

Jeff Held - Strand Associates

Steve Smith - INDOT

Rob Bostrom - Wilbur Smith Associates

Bob Koehler - OKI

Eryn Hays - INDOT

David Butts - INDOT

Larry Heil - FHWA

Bill Miller - OKI

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[Date]

Erin Peterson - ME Companies

Jim Ude - INDOT

Mary Jackman - INDOT

Leslie Trobaugh - Strand Associates

Chris Andrews - INDOT

Dave Hunter - Wilbur Smith Associates

Ray Nunnally - INDOT

Jason Falls - DOE Anderson

Scott Roush - Strand Associates

MEMORANDUM

- ☐ Information Only
- ☐ Project Specific
- ☐ Policy Memo - File With

TO: File
FROM: L.Trobaugh/S. Roush/Jeff Held/B. Rape
DATE: April 18, 2007
RE: US 50 Corridor Study Project Team Meeting - Corridor Study Report Review

This date a meeting was held at the INDOT offices in Indianapolis. A list of attendees appears at the end of this document. The purpose of the meeting was to review the draft corridor study report developed by Strand Associates for the US 50 Corridor Study. Also attending was Paul Hershkowitz, from Wilbur Smith Associates; Wilbur Smith has developed the travel demand modeling data and report for the corridor study.

After introductions, Scott Roush from Strand briefly discussed the EIS Streamlined Process of which the Project Management Team is a part, and that this meeting was the third of the three scheduled meetings for the Project Management Team.

Bruce Rape then presented the Power Point presentation highlighting major components of the draft study report:

Purpose of the Project – Identify potential transportation system improvements to alleviate congestion and safety issues along the US 50 Corridor in Dearborn, County, Indiana.

Existing Conditions Report – Previously submitted part of the draft document which focuses on existing geometrics of the corridor, access points, bridges, crash data, and traffic operations.

Purpose And Need – Previously submitted part of the draft document which evaluates the study area in its function as a Statewide Mobility Corridor and identifying the portions of the corridor which fail to meet mobility corridor guidelines and develop potential transportation projects to improve the operations of the corridor to an acceptable level.

Transportation Demand Modeling – Report developed by Wilbur Smith and Associates which models current and future traffic movements along the corridor including specific examination of Alternatives 5 and 9 and their impact on traffic volume on US 50.

Alternative Development – discussion of criteria for developing alternatives and how preferred alternatives are selected.

Draft Report – Elements of the report: Existing conditions, purpose and need, alternatives presentation and screening, environmental and cultural considerations, recommendations.

Segments of the Corridor Study/Selected Alternatives – projects of independent utility that fulfill the purpose and need of the study and which are proposed to move forward for more in depth study.

- a. Segment 1 (Dillsboro to Aurora – SR 262 to SR 148) no projects of independent utility. Access management solutions.
- b. Segment 2 (Aurora to Lawrenceburg – SR 148 to SR 48) US 50 & Wilson Creek Road intersection improvement, US 50 & Wal-Mart entrance intersection improvement, TSM Concept 11 which eliminates left turn lanes except at major intersections, barrier median.
- c. Segment 3 (Lawrenceburg – SR 48 to Arch St.) TSM Concept 2 which prohibits left turns, Alternate 1: on-alignment capacity expansion, Alternate 5: new alignment from Main Street thru Front street tying back into US 50, Alternate 6: new alignment from Main Street to north of levee tying back into US 50.
- d. Segment 4 (Greendale – Arch St. to I-275) US 50 & I-275 intersection improvements.

Public Involvement – Various public involvement processes including the Community Advisory Committee, Public Information Meetings, and methods utilized to increase public awareness of the project.

Streamlined Process – define existing conditions, develop purpose and need, select alternatives, develop report.

General Discussions during and following the presentation:

INDOT - It would be a good idea to include the mention of SR 1 improvements as part of the US 50/I-275 intersection improvements.

FHWA – The 3 selected alternatives for Segment 3 (Lawrenceburg) will not be examined independently of one another. These alternatives will be evaluated as part of an Environmental Assessment with one eventually being selected as the preferred alternative.

INDOT – We should assume that the “no left turn” concept in Lawrenceburg is only during peak times. May want to add what type of signage may be used. Seymour district will do some research. Electric signage vs. informational.

INDOT – re: status of current Tanner’s Creek Bridge project. Contract still pending – discussions ongoing between INDOT/LPA/Consultant. Certain to be questions at CAC & PI meetings about the project. Has Strand seen anything on the bridge? Need to verify that alternatives 1, 5 & 6 will be compatible with new bridge design.

STRAND – Alternatives were based on conceptual drawings available at beginning of this project. Strand to discuss with American Structure Point.

INDOT – want design concept & scope & a recommendation for preferred alternative under separate cover.

INDOT – surprised at construction cost estimate for Alt 1 – also Alt 6 construction cost estimate seems low. Is the levee being bridged or is new alignment on school property? Intersection @ US 50 – I-275 seems very high. Is this taking the OKI project into account?

STRAND – INDOT construction cost estimator spreadsheet was used to calculate costs. Can provide data to INDOT for verification that costs are appropriate. Levee is being bridged & was taken into consideration in construction costs. Alignment would be on other side of levee, not school side. OKI project was taken into consideration in developing costs for intersection improvements.

INDOT – how far back will the improvements go on SR 1?

STRAND – 500 to 700 feet.

INDOT/OKI – The US 50/I-275 interchange improvements should also add additional travel lanes and realign SR 1 from US 50 to Nowlin Avenue.

FHWA – We want to make clear in the environmental document that the Connector project (Alt 8) is still programmed separately as a local project & still viable as a local agency project even though it does not fulfill the purpose and need for selection as a preferred alternative for the corridor study improvements.

INDOT – Is Alt. 1 3 lanes each way?

STRAND – Yes. In vicinity of new bridge – one lane will be dedicated from Main Street

INDOT – Are there protected left hand turns via bays?

STRAND – Yes

INDOT – Next step will be to program selected alternatives into STIP, look at available funding. Selected project(s) will have to be evaluated against other potential projects statewide. If projects are selected for construction we are looking at 2016 or later.

FHWA – Would not begin the EA/FONSI until 3 to 4 years prior to anticipated construction.

STRAND – Upcoming meetings include the CAC meeting on April 24, the Agency Team Meeting, and the Public Information Meeting on April 30th. All meetings are in Lawrenceburg.

STRAND – Revisions suggested during this meeting will be incorporated into the final document, but will be sometime after the CAC meeting. Will need to know how many copies of final report are required.

INDOT – Will investigate that & provide the number of copies needed.

MEETING ADJOURNED

Attendees:

Steve Smith - INDOT
Ben Lawrence - INDOT
David Butts - INDOT
Jim Ude - INDOT
Mary Jackman - INDOT
Pankaj Desai - INDOT
Frank Baukert - INDOT
Loni Hyrnk - INDOT
Larry Heil - FHWA
Bob Koehler - OKI
Scott Roush - Strand Associates
Jeff Held - Strand Associates
Bruce Rape – Strand Associates
Leslie Trobaugh - Strand Associates
Paul Hershkowitz - Wilbur Smith Associates